

## Report Card 2021–22

The [Perth Air Quality Management Plan \(Perth AQMP\)](#) was released in December 2000. It aims to ensure that clean air is achieved and maintained throughout the Perth metropolitan region to 2030 and beyond.

The short-term and long-term actions within the Perth AQMP address a variety of issues through eight key initiatives: land use and transport planning; vehicle emissions management; health effects research and indoor air quality; monitoring and modelling; industrial emissions management; small to medium enterprise emissions management; haze reduction; and smoke management.

Some highlights include:

### Your Move program



The Your Move program informs and encourages the community to make more trips by walking, bike riding and using public transport in place of some car trips. Boosting the use of active transport options can make better use of walk and bike paths and public transport services, contribute to community health and wellbeing and reduce car use and associated emissions and congestion. The program develops and delivers projects in target communities. In 2021–22, a project was run in the City of Canning with a focus on schools.

The [Your Move website](#) makes it easier for all school, workplace and local government program participants to interact, share and use the program resources.

#### Highlights 2021–22

- Starting in April 2022, a Your Move project was delivered in the City of Canning promoting local trips by walking and riding.
- The project aimed to recruit 4,000 residents to provide information about their commutes and to motivate them to make more local trips by walking and riding, resulting in fewer car trips.
- Eight local primary schools were supported to encourage students to walk and ride. Assistance for schools included providing ‘school engagement officer time’ where a contractor spent time with school champions (teachers or parents leading their school’s involvement in the program) to plan and deliver activities. Activities included walk- and ride-to-school events, bike skills education and in-class exercises on active transport.
- For five of these schools, walk and bike routes were assessed and wayfinding was installed to highlight the routes. For one school, the City of Canning made upgrades to enhance key routes, such as installing kerb ramps and adding sections of footpath and grab rails at key road crossings. Wayfinding signs were installed on paths and a school access guide was produced and distributed to students to promote walking and riding.

### RAC Electric Highway®



A first in Australia, the RAC Electric Highway® opened in June 2015. It is an RAC initiative, supported by local governments from Western Australia’s southwest, that:

- aims to reduce carbon dioxide emissions from cars and promote the growth of alternative vehicles
- builds on an idea by a WA community-based committee and supports the RAC’s sustainable mobility agenda
- will connect Perth with Western Australia’s southwest through a series of fast charging stations
- is a positive and real contribution toward encouraging the uptake of low and zero emissions vehicles in Western Australia, while helping to eliminate the issue of access to infrastructure for electric vehicle (EV) owners.

#### Highlights 2021–22

The expansion of the RAC Electric Highway® is progressing.

- The installation of a new destination charger in Monkey Mia has been completed.
- Local government partners have supported the introduction of a 20 per cent RAC member discount on all RAC Electric Highway® chargers.
- RAC has worked with local governments along the network to transition 11 chargers to green energy.

### State Electric Vehicle Strategy for Western Australia



The \$21 million [State Electric Vehicle Strategy for Western Australia](#) was released in November 2020. The strategy provides a pathway for decarbonising road transport, improving air quality and supporting a robust electricity system with increasing levels of renewable energy.

#### Highlights 2021–22

The strategy is supported by the Clean Energy Car Fund. Together they include:

- more than \$22 million of investment in the WA EV Network, including the construction of charging infrastructure to support EV travel across WA
- \$36.5 million for up to 10,000 rebates of \$3,500 to Western Australians purchasing EVs up to a value of \$70,000
- \$15 million to support not-for-profits, small to medium enterprises and local governments to install charging infrastructure
- \$4 million for charging infrastructure at train stations
- the trial of electric buses in Joondalup
- the local manufacture of 130 buses to transition the Perth bus network to electric buses and deliver infrastructure upgrades, which will match the Australian Government’s \$125 million funding for electric bus charging infrastructure.

Additionally, the Department of Jobs, Tourism, Science and Innovation has continued to implement the [Western Australian Renewable Hydrogen Roadmap](#), including the provision of a hydrogen refuelling station.



## CleanRun



CleanRun is a Department of Water and Environmental Regulation program consisting of a range of targeted initiatives to reduce vehicle emissions including:

- running the Smoky Vehicle Reporting Program for community reporting of smoky vehicles, jointly with the Department of Transport
- engaging with vehicle owners to undertake any necessary vehicle maintenance
- identifying vehicles that are at risk of breaching vehicle emission legislation.

### Highlights 2021–22

The [Smoky Vehicle Reporting Program 2021–22 Annual report](#) was published. Key findings in the report included:

- In 2021–22, 796 vehicles were reported via the reporting form on the Department of Water and Environmental Regulation website.
- Two-thirds of reported vehicle owners advised having repaired or serviced their vehicles.
- Reporter diversity has decreased slightly in 2021–22, with an average of 2.01 reports per reporter compared to 1.68 in 2020–21. Improving reporter diversity is important for more reliable reporting outcomes.
- Diesel vehicles continue to be over-represented in reports with 80 per cent of vehicles reported to be diesels.

## Air Quality Monitoring and Modelling



The objectives of this program are to:

- introduce procedures for the ongoing development of current air quality models and the review of new modelling methods and techniques for application in Perth
- ensure that the existing monitoring network is maintained and improved and assess trends in air quality
- develop future monitoring programs, based on the exposure to and impact of air toxics and acid gases, and evaluating monitoring options, such as mobile monitoring facilities.

This program, run by the Department of Water and Environmental Regulation, aims to ensure that the existing monitoring network is maintained and improved and assesses trends in air quality. This program incorporates the review of Perth ambient air quality monitoring data and the review and improvement of monitoring equipment.

### Highlights 2021–22

- Progressed a two- to three-year program for the development of an advanced regional air quality model for use in priority airsheds including Perth.
- Continued to access the Pawsey Supercomputing Centre to assist with regional model development, with preliminary work underway.
- Started development of an air emissions inventory for use in an updated Perth regional air quality model.
- Tested new devices/methodologies including real-time particle sensors, optically based particle monitors and real-time heavy metals monitors.
- Progressed equipment and site upgrades with old or obsolete equipment retired from the network.

## Community Health Study



Landscape fires (LFs), including bushfires and prescribed burns, have increased over the past two decades and are expected to continue in frequency and intensity due to climate change.

LFs are the main source of short-term elevations in fine particulate matter (PM<sub>2.5</sub>) in Australian cities and towns, including Perth.

Adequately assessing population exposure to smoke is problematic due to the variation in smoke over large urban areas.

The aims of this project were to:

- develop a smoke exposure model to assess the population's exposure to LF smoke in Perth
- use the model to assess the effects of LF smoke on hospital admissions and emergency department attendance (EDA) for a wide range of cardio-respiratory conditions in Perth.

### Highlights 2021–22

- A LF smoke exposure model, using a series of air quality monitoring, earth observation (satellite imaging) and climate data, was developed and validated.
- The model was used to assign daily PM<sub>2.5</sub> levels across the Perth Metropolitan Area for the period between 1 July 2015 and 31 December 2017. Daily PM<sub>2.5</sub> levels were then correlated with hospital admissions and emergency department attendances.
- The study found associations between smoke-related PM<sub>2.5</sub> and:
  1. general EDAs and general hospital admissions
  2. EDAs for acute lower respiratory tract infections
  3. both EDAs and hospital admissions for cardiovascular events
  4. both EDAs and hospital admissions for asthma.
- This study demonstrated that LF smoke can adversely impact the health of Western Australians.

Further information can be found on the [Department of Health website](#) and the study's [journal publication](#).

## About the Air Quality Coordinating Committee

The Air Quality Coordinating Committee (AQCC) is comprised of representatives from State Government, industry, business and the community. Its role is to monitor the implementation of the [Perth Air Quality Management Plan](#) and review the progress towards achieving its aims.

## AQCC members Membership as at 30 June 2022:

### State Government

- Sarah McEvoy – Chair ([Department of Water and Environmental Regulation](#))
- Mirella Goetzmann ([Department of Health](#))
- Justin McKirdy ([Department of Transport](#))
- Katie MacWilliams ([Department of Biodiversity, Conservation and Attractions](#))
- Jackie Stone ([Department of Planning, Lands and Heritage](#))
- Joscyln Sloan, ([Department of Mines, Industry Regulation and Safety](#))

### Community

- Professor Philip Jennings ([Conservation Council of Western Australia](#))
- Dr Sue Graham-Taylor (Pollution Action Network)
- Martin Chape (Community Member)

### Business and Industry

- Nick Jones ([WA Local Government Association](#))
- Chris Oughton ([Kwinana Industries Council](#))
- Anne Still ([Royal Automobile Club of WA](#))

The Air Quality Coordinating Committee met twice between July 2021 and June 2022.

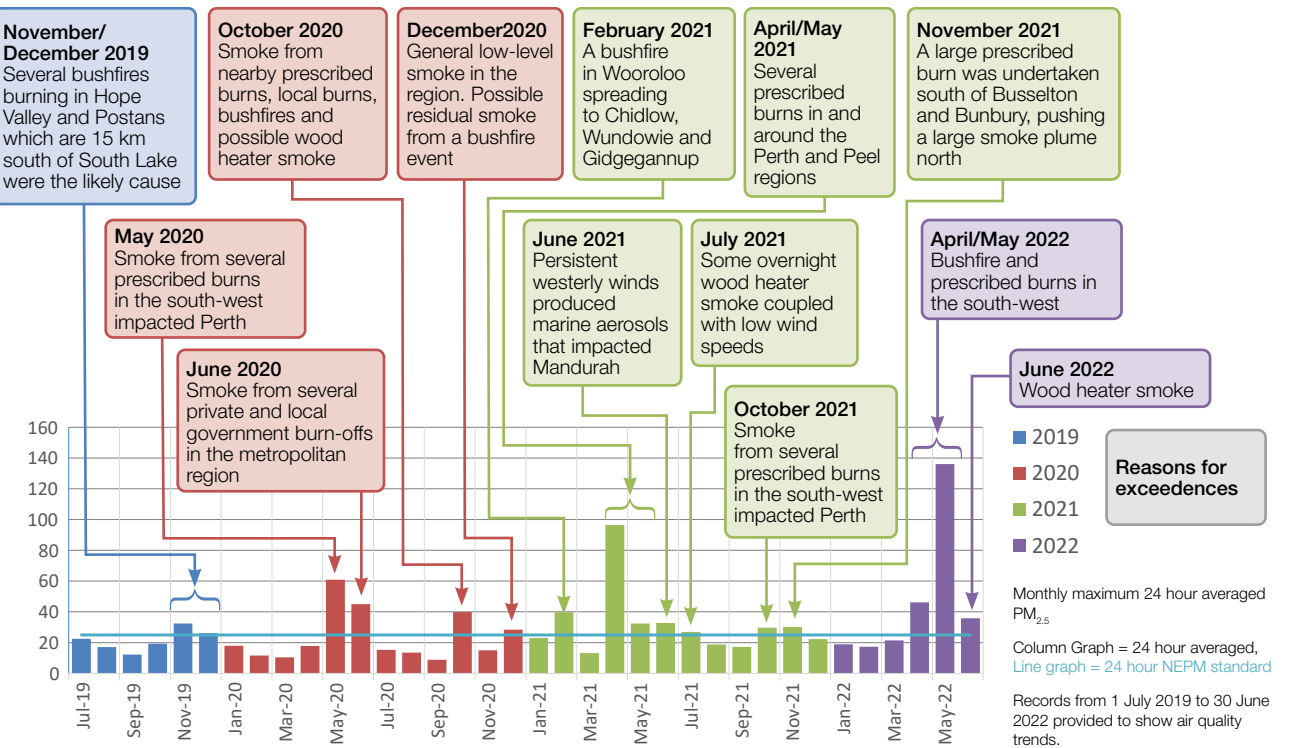
## Contact the Air Quality Coordinating Committee

For more information, please contact the secretary:  
 Phone: 6364 6581  
 Email: [AQCCadmin@dwer.wa.gov.au](mailto:AQCCadmin@dwer.wa.gov.au)  
 or visit the [Air Quality Coordinating Committee webpage](#)

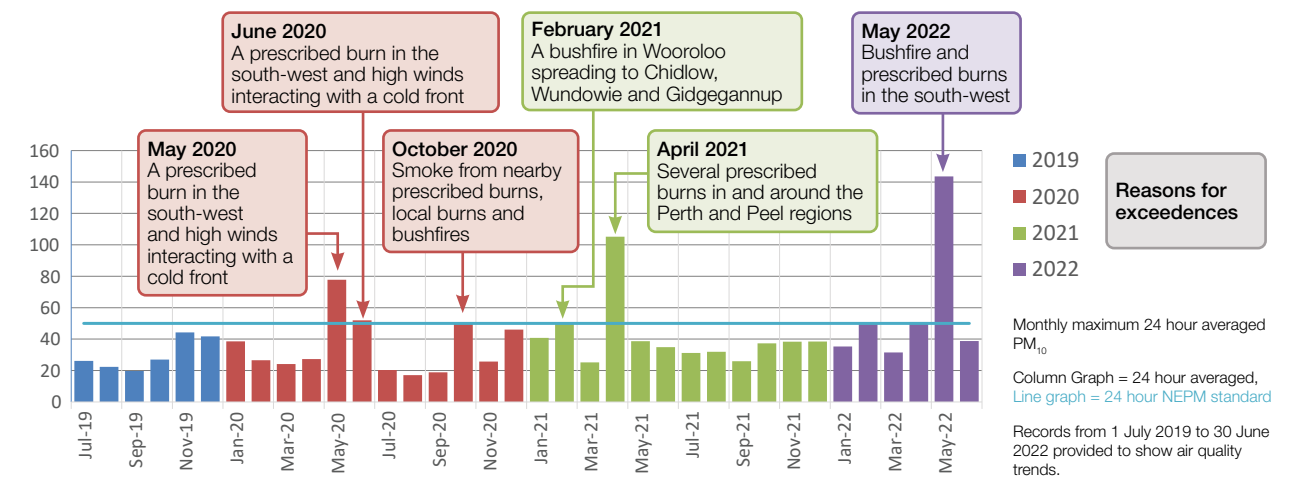
# Air pollutant trends 2019-22

The graphs below show the maximum levels for fine particle (PM<sub>2.5</sub>), coarse particles (PM<sub>10</sub>), ozone and nitrogen dioxide from 1 July 2021 to 30 June 2022, recorded at Perth monitoring stations (Armadale, Caversham, South Lake, Duncraig, Mandurah, Rolling Green, Quinns Rocks, Rockingham, Swanbourne and Wattleup). For comparison, the diameter of a human hair is seven times the diameter of the largest coarse particle (PM<sub>10</sub>). The high concentrations of particles were primarily due to natural dust and smoke haze. The precursors for ozone (an indicator of photochemical smog) are produced predominantly by motor vehicles and industry. Nitrogen dioxide in cities is predominantly caused by motor vehicles and contributes to the formation of photochemical smog.

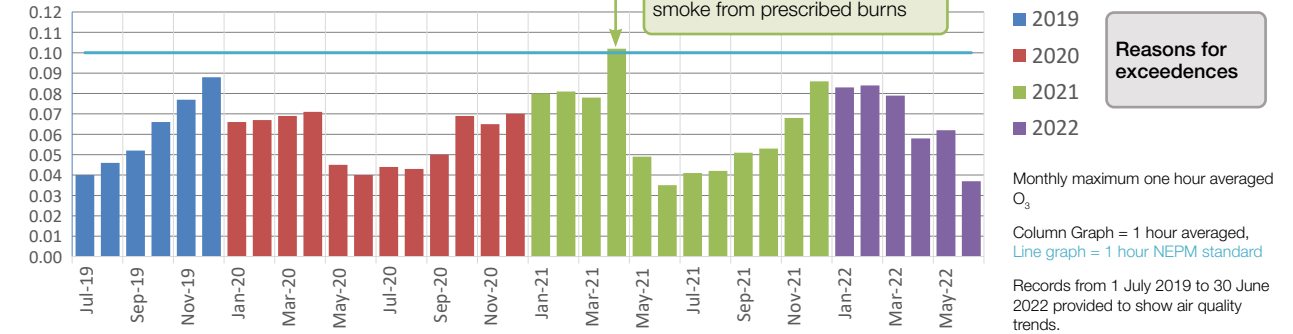
## PM<sub>2.5</sub> Particles $\mu\text{g}/\text{m}^3$



## PM<sub>10</sub> Particles $\mu\text{g}/\text{m}^3$



## Ozone ppm



## Nitrogen dioxide ppm

