Clean air FACT SHEET

Summit Overview

We welcome your participation in the Victorian Government Clean Air Summit.

Through this Summit, you will have the opportunity to shape the content of the Victorian Government's Air Quality Strategy, which will underpin government air quality management policies and programs through to 2030.

Your key role at the Summit is to help develop objectives for the Strategy – what it should aim to accomplish - and actions it could contain to achieve these objectives. This will be done in collaboration with your fellow attendees from community, industry, environment, academia and government sectors.

You will also hear from experts on a wide range of air quality management topics, to help inform your thinking. The Summit is critical to develop a comprehensive and practical approach to secure a clean air future for all Victorians.

Location Details

Where

- Melbourne Convention and Exhibition Centre
- 1 Convention Centre Place, South Wharf 3006
- Rooms 210 – 211
- These rooms are located on the second floor
- There will be signage at all entrances to help direct you to these rooms

When

- **9.30am to 4:30pm**
- Registrations open at 9.00am - please try to arrive around this time.

How to get to/park at the Convention Centre

- Please see the FAQ section on the Eventbrite Invite or visit https://mcec.com.au/visit/visit-information#getting-here

Name tags

When you arrive, you will be given an event badge with your name and, if relevant, organisation on it.

Next to the registration table, you will find a table with stickers representing air quality themes. You can select three stickers to represent your key interests for the day – for example, biomass emissions, transport emissions or air quality monitoring:

Please place these three stickers on your badge in the marked area – this will let other attendees know where your interests lie and we hope will be a good conversation starter!

Fact sheets

Please read the other fact sheets in this series before the Summit, especially if you have an interest but not necessarily detailed knowledge on air quality management. We have designed them to provide some key background information to assist in Summit discussions and activities.

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Agenda

Time	Activity	Summary
9.00am	**Arrivals and registration**	Pick up your event badge, catch up with colleagues and meet new people (Tea and coffee available)
9.30am	**Welcome** Kath Rowley, Executive Director Climate Change Department of Environment, Land, Water and Planning	An outline of the day ahead - presentations, activities and engagement opportunities
09.50am	**Opening address:** Hon Lily D'Ambrosio MP Minister for Energy, Environment and Climate Change	
10.10am	**Keynote speech** Dr Andrea Hinwood Victoria's Chief Environmental Scientist	Air pollution in Victoria – a summary of the state of knowledge Further details below
10:40am	**Developing an Air Quality Strategy** Kate Gavens, Director Environment Protection Department of Environment, Land, Water and Planning	Aims of the Air Quality Strategy Feedback received on Victoria's Air Quality Statement Introduction to today's activities
11:10am	Morning tea	
10.40am	**Activity 1** Further details below	What should the objectives of the Air Quality Strategy be? - a chance for everyone to have their say
12.15pm	**Concurrent presentation sessions 1a and 1b** Further details below	Informing you of some of the latest air quality science and management approaches – two concurrent sessions with three expert presentations in each
1:00pm	Lunch	Including an opportunity to hear perspectives on future air quality management priorities from Environmental Justice Australia at 1.00
1.50pm	**Concurrent presentation sessions 2a and 2b** Further details below	Informing you of some of the latest air quality science and management approaches – two concurrent sessions with three expert presentations in each
2.35pm	**Results from Activity 1**	Overview of attendees' views on Strategy objectives
2.50pm	**Activity 2** – developing actions to deliver success *Afternoon tea available during this session* Further details below	How can we achieve the objectives of the Air Quality Strategy? - a chance for everyone to help develop actions to improve future air quality
4.25pm	Next steps and close	

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Activities

Activity 1

Where: In foyer (outside rooms 210 and 211)

Activity 1 will bring attendees together in pairs or groups to brainstorm:

- What do you think the Air Quality Strategy should aim to achieve? What should its objectives / goals be?

Structure: informal discussions and, for each pair or group, writing of one or more suggested objectives on A6 cards

What you will be doing: We will be asking you to think about what a clean air future for Victoria looks like and, specifically, what the Strategy should ideally achieve to help give this effect.

- Talk with another attendee or small group about what you think these objectives should be.
- Agree on up to three objectives you want the Air Quality Strategy to achieve.
- Write these on the A6 cards provided.
- These will be collected and summarised. Summarised objectives will be used later in Activity 2 (see below).

Examples of objectives (some additional ones will be provided on the day)

- There will be fewer days of poor air quality due to wood heater smoke in my community by 2030
- There will be no increase in regulatory or financial burden for my business
- There will be lowered emissions from heavy vehicles in residential areas in Melbourne

The focus is on objectives - not actions. Actions will be the focus of Activity 2

Activity 2

Where: In rooms 210 and 211

Activity 2 will brainstorm actions necessary to achieve the objectives developed during Activity 1.

Structure – Working in small groups at tables, each with access to a facilitator

- Tables will be organised by air quality theme (eg biomass, industry, transport, monitoring) – attendees will be free to choose the theme/s they are most interested in.
- There will be three rotations to enable a wide variety of perspectives.

The first of these rotations will focus on

- Developing and writing down actions to help achieve Strategy objectives - relevant to the theme (developed in Activity 1)
- 30 minutes available (including time for some afternoon tea)

Rotation 2

- Attendees move to another table (including to another theme if desired)
- Further suggest or consolidate actions, based on what you find at the new table
- 15 minutes available

Rotation 3

- Attendees move to another table (including to another theme if desired)
- Consolidate actions – aiming for five key actions critical to successfully achieving the objective
- 15 minutes available

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Keynote presentation

Keynote presentation

Dr Andrea Hinwood, Victoria's Chief Environmental Scientist, will present on the state of knowledge of air quality in Victoria. Victoria's air quality has improved significantly over recent decades and is considered good by world standards. However, air pollution remains an important environmental and human health issue. Dr Hinwood will outline our current knowledge about air quality, pollutants, sources, trends and impacts in Victoria as well as actions that we need to take to build our understanding and evidence base to inform decision making in the future. She will also present suggestions for the types of applied science work we will need in future to inform management actions.

Dr Andrea Hinwood is the inaugural Chief Environmental Scientist at the Environment Protection Authority Victoria, appointed in May 2017. She was previously an Associate Professor at Edith Cowan University in Western Australia and held appointments as a member and Deputy Chair of the Environmental Protection Authority of WA and also a sessional member of the State Administrative Tribunal of Western Australia. Her PhD is in environmental epidemiology from Monash University and her Masters in Applied Chemistry from RMIT. Her research has been in identifying human exposure to a variety of pollutants in a range of environmental media.

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Lunchtime session

Lunchtime session (Room 209)

Environmental Justice Australia

Perspectives on future air quality management priorities

Nicola Rivers, Director of Advocacy and Research
Nicola's work on clean air campaign has seen her engaging with grassroots environment groups and local communities around Australia to protect rights to clean air. She has also lead EJA's advocacy on a range of issues such as Victorian climate and water law, and national biodiversity laws. Prior to joining EJA, she worked as a senior lawyer with the Environment Department of Western Australia. She has also worked for the Federal Attorney General's department and as a policy officer for the Federal Environment Department. Nicola is a Fellow of the Centre for Sustainability Leadership.

Bronya Lipski, Lawyer
Bronya's work as an environmental lawyer focusses on pollution and environmental public interest advocacy. Born and raised in Victoria's Latrobe Valley, she is passionate about legal empowerment of the community.

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Concurrent Sessions

Concurrent presentation session 1a – Room 209

12.15 to 1.00 pm

Composition of smoke pollution

With the wide range of sources and formation process that result in the many different sizes and chemical compositions of particulate matter we are exposed to in our atmosphere, it remains unclear what aspect of particles cause this harm. This presentation will discuss the sources of particulate matter, how these sources are determined, and the research required to understand how these sources may be impacted by a warming climate.

Dr Melita Keywood is a Principal Research Scientist at CSIRO Oceans and Atmosphere located at Aspendale. Dr Keywood has 22 years of experience in aerosol research and has authored 64 peer reviewed journal publications and over 70 client reports, including the Atmosphere Chapter of State of the Environment 2016.

***Australian Integrated Multimodal Ecosystem (AIMES)* - Low Cost Sensor trialing in Melbourne**

AIMES has seen a new range of "smart" environmental sensors in place in central Melbourne. The sensors have been installed along Victoria and Alexandra Parades by the University of Melbourne in partnership with the Environment Protection Authority (EPA) and Active Reactor Ltd. This presentation will provide an overview of the deployment and trial of these sensors.

Jason Choi is a Specialist Applied Scientist specialising in air quality and odour issues at EPA Victoria's Centre for Applied Sciences. He provides scientific advice on EPA's regulatory functions, including developments of new industry and technology as well as licencing and enforcement. He is also a forecast officer and provides advice on air quality issues during emergency events and is CASANZ Deputy President.

Bushfire and Planned Burn Smoke – Is it a public health concern?

Exposure to smoke from bushfires and planned burns is expected to increase in the future due to a warming climate. But what do we really know about the human health effects of the smoke that Victoria has experienced to date, and will experience in the future? This presentation will present local evidence and will discuss what measures can be taken to reduce exposure.

Dr Martine Dennekamp is a Senior Environmental Epidemiologist with the Environmental Public Health Unit at EPA Victoria. Prior to joining the EPA she worked for Monash University and most of her research was focussed on air quality and health, and included several studies related to outdoor smoke episodes.

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Concurrent presentation session 1b – Room 208
12.15 to 1.00 pm

Reducing emissions from planned burns

Darrin McKenzie is the Deputy Chief Fire Officer (DCFO) for Statewide Integration at the Department of Environment, Land, Water and Planning (DELWP). Darrin has extensive experience in forest and fire management in both the private and public sectors. As a DCFO, Darrin supports the Chief Fire Officer (CFO) in determining preparedness requirements, and ensuring that command, control and coordination arrangements are effectively implemented across the state. Darrin also has the responsibility under the CFO in relation to fire and emergency readiness, response and planned burning operations.

Smoke dispersal modelling

To help with hazard reduction burn decisions, DELWP, the Bureau of Meteorology and CSIRO have collaborated to develop a new quantitative smoke prediction system based on integrated modelling of weather conditions, smoke from dynamic vegetation fires, and chemical evolution, transport and dispersion of the smoke. The Smoke and Air Quality forecast system (AQFx) runs every day to produce 3-day forecasts of air quality and day-ahead forecasts of smoke and PM 2.5 from proposed burns.

Beth Ebert leads the Bureau of Meteorology's Weather and Environmental Prediction research section, which conducts research and development in many areas of applied meteorology to improve the Bureau's forecast services. Her personal research interests include diagnostic methods for forecast verification and prediction systems for smoke and air quality, pollen and thunderstorm asthma, and hazard impacts.

An outline of agricultural stubble uses as alternatives to burning in Victoria.

Retention of crop stubble residues is advocated by most agricultural organisations and farmer groups. Stubble retention has well-documented benefits, including nutrient recycling, reduced erosion through provision of ground cover, improved rainfall infiltration and reduced moisture evaporation. However, stubble management can be a complex issue for farmers to contend with. Heavy stubble can impede sowing equipment, harbour pests and chemical resistant weed seeds, and act as a 'green bridge' for carry over of diseases - thus burning is undertaken as a last resort to dispose of these heavy stubble loads when required. Alternatives to burning include grazing, straw hay or variations of slash/cultivation. This talk will outline:

- overview of stubble management and stubble burning in Victoria,
- recent studies into the potential uses of stubble,
- obstacles to finding productive and sustainable uses for stubble, and
- projects that are currently being developed around alternatives to stubble burning in Victoria

Liz Hamilton works as a Knowledge Broker in the Seasonal Risk Team in Agriculture Victoria. One of the projects she is involved in is the establishment of the Stubble working group, an informal group made up of individuals from within and outside of govt who share a common interest in exploring alternatives to burning of stubble.

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Concurrent presentation session 2a – Room 209

1.50 to 2.35 pm

Empowering students to learn about air quality in their communities

Fabienne will discuss a hands-on STEM project involving primary and secondary schoolchildren and teachers to learn about air pollution and how to operate, program and analyse the output from low-cost particle sensors, called SMoke Observation Gadget (SMOG). Students will deploy these SMOG units in their neighbourhood to monitor ambient particles, and then process and analyse collected data. The data will assist researchers to measure the impact of ambient particles on local and regional air quality.

Dr Fabienne Reisen is a senior atmospheric research scientist in the Climate Science Centre of CSIRO Oceans and Atmosphere. Fabienne's research focuses on biomass burning emissions and improving our understanding of the chemical composition of smoke plumes and how these impact air quality and health.

Latrobe Valley monitoring and citizen science

EPA Victoria worked with the Latrobe Valley community to develop a blueprint for a more extensive EPA air monitoring network in the Valley. More than 30 community members participated in the co-design process, which developed a single model for the air monitoring network. Community members were supported by EPA's air scientists and local experts during the design process, which took place in late 2016. This case study will show how you can achieve great results by involving the community in the decision-making process of designing an air monitoring network.

Emma Saville is a Science Communications Advisor at EPA. Emma acts as a translator of complex scientific information to all Victorians. She is currently working to deliver more meaningful data, information and education to the Latrobe Valley community.

Applications of low-cost sensing technologies for air quality monitoring and exposure assessment: how far have they gone?

Exploring the technological progress of low cost air quality sensor in Australia and internationally, with a particular focus on data generation in context to citizen science.

Lidia Morawska is a Professor at the Queensland University of Technology (QUT), the Director of the International Laboratory for Air Quality and Health (ILAQH) at QUT, which is a Collaborating Centre of the World Health Organization and a co-director of the Australia-China Centre for Air Quality Science and Management

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Concurrent presentation session 2b – Room 208

1.50 to 2.35 pm

Thunderstorm Asthma

What is epidemic thunderstorm asthma? Actions and strategies to address risks from epidemic thunderstorm asthma. On 21 November 2016 Victoria experienced the world's largest epidemic thunderstorm asthma event on record. Following this event the Department of Health and Human Services developed an Epidemic Thunderstorm Asthma Program to address potential future impacts, as well strategies to address risks.

Dr Clare Looker is a Principal Public Health Medical Officer (Environment) for the Department of Health and Human Services Victoria. She has considerable experience across a wide range of environmental public health issues, and was heavily involved in understanding the impact of the 2016 epidemic thunderstorm asthma event.

Automated and zero emission vehicles

Infrastructure Victoria was asked to provide advice to the government on the infrastructure requirements for automated and zero emissions vehicles. The research included a detailed report on environmental and health impacts of zero emissions vehicles. Allison will give an overview of the work completed and the key findings from this research.

Dr Allison Stewart is the Project Director for Infrastructure Victoria's Automated and Zero Emissions Vehicles Infrastructure Advice. Allison is an experienced capital projects leader, strategist and academic, with experience working in the infrastructure, energy, defence, and mega-events industries.

Updating Victoria's air emissions inventory

Jason Choi is a Specialist Applied Scientist specialising in air quality and odour issues at EPA Victoria's Centre for Applied Sciences. He provides scientific advice on EPA's regulatory functions, including developments of new industry and technology as well as licencing and enforcement. He is also a forecast officer and provides advice on air quality issues during emergency events and is CASANZ Deputy President.

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