

Sarnia Area Environmental Health Project Update

The Project aims to help address concerns of Sarnia area communities about air pollution and other quality of life impacts associated with living close to industrial facilities. It will help improve our understanding of the links between the environment and health in the community.

One part of the project is an Air Exposure Review - an assessment of exposures to chemicals in outdoor air, and the associated health risks. This Review is led by a team of environmental health consultants (with guidance from several project partners, including the Aamjiwnaang First Nation Health and Environment departments).

The consultants will be using air quality information from monitoring and modelling data.



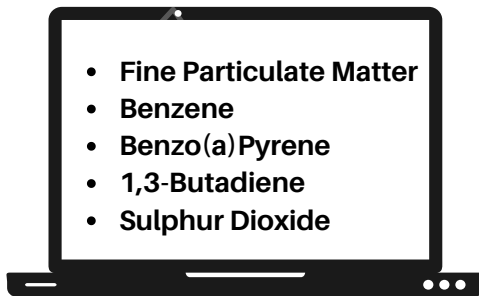
AIR MONITORING DATA

Air Monitors are equipment that measure concentrations of different chemicals in the air at select locations. In Sarnia, several chemicals are measured through an extensive monitoring network. This includes:

- Common air pollutants (e.g, nitrogen oxides, sulphur dioxide)
- Benzene and similar compounds
- Metals (e.g, lead)
- Aromatic hydrocarbons (e.g, trimethylbenzene)



Monitoring data on several chemicals can be accessed via **CASA** (cleanairsarniaandarea.com) and **Air Quality Ontario** (airqualityontario.com).



AIR MODELLING DATA

Modelling is a powerful tool that estimates air concentrations and provides information about air quality. For the project, the Ministry modeled 5 key chemicals of concern.

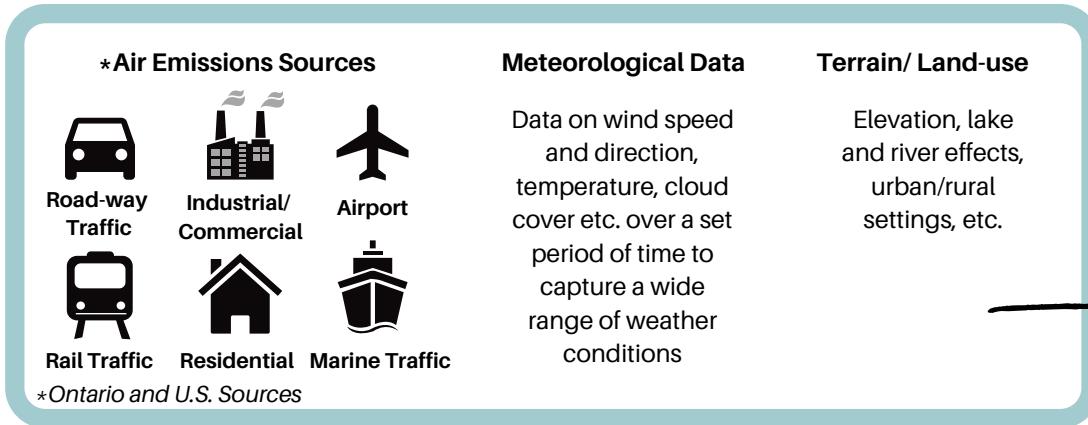


Project materials, including modelling results, can be accessed on the **Sarnia Area Environmental Health Project website** via **CASA** (cleanairsarniaandarea.com)

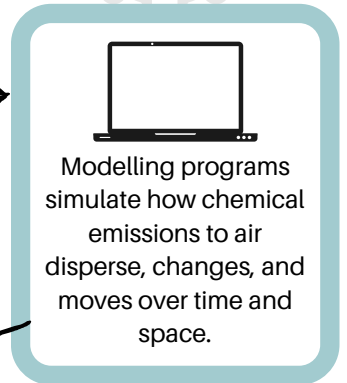


The Ministry modelled all sources of contaminants to air, to create detailed information on air quality. This modelling factors in cumulative impacts by considering emissions from multiple sources:

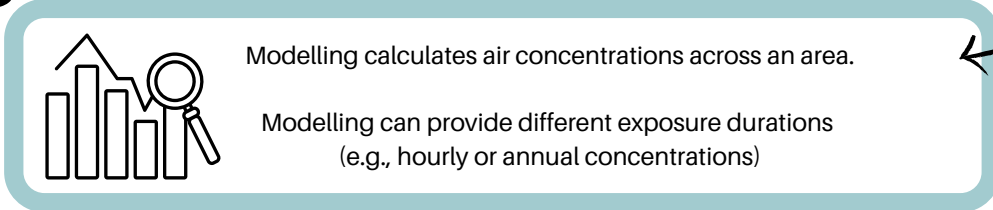
1 Data on emissions, weather, and terrain are included in the modelling.



2 Modelling

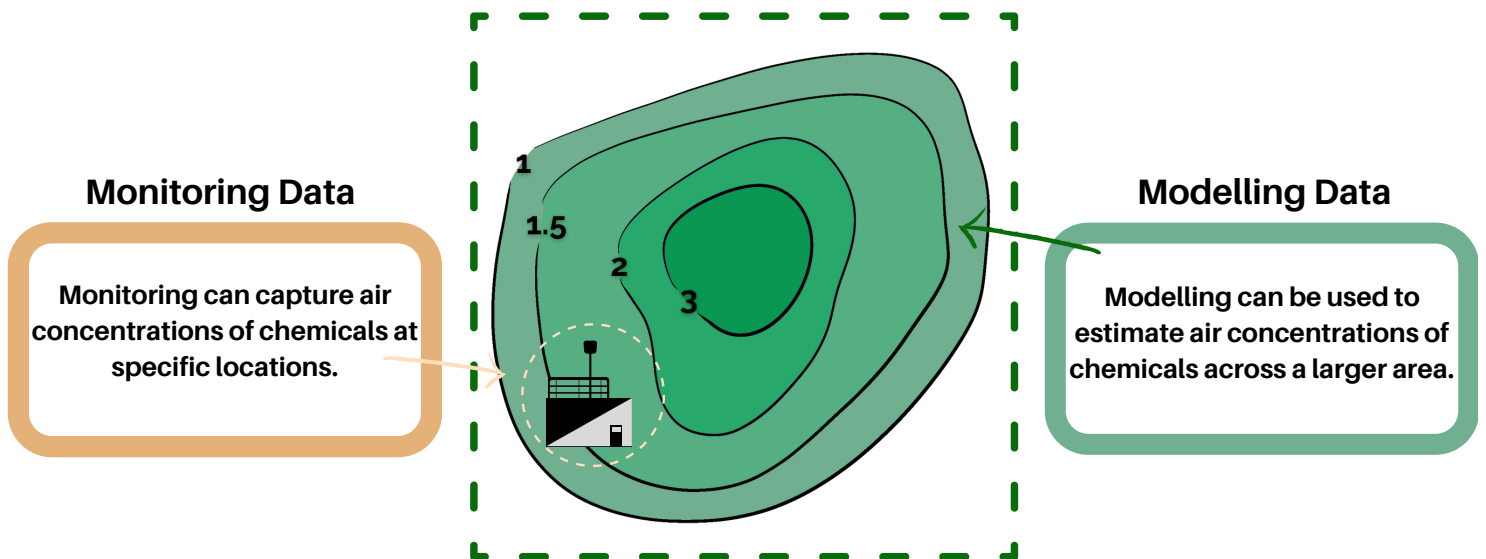


3 Modelling results provide us with air concentration information.



Modelling and monitoring data are complementary.

Modelling combined with monitoring data provides a much clearer picture of how chemical concentrations vary across an area, compared to monitoring data alone:



i Isopleth maps, like the example above, use lines or colours to indicate locations where the same air concentration could occur.

The Air Exposure Review will use the monitored and modelled data to characterize the associated community health risks, and share the results with the community.