

Let's Talk Air Pollution

City of Kelowna
City of West Kelowna
District of Lake Country
District of Peachland
Westbank First Nation
Regional District of Central Okanagan



What are the pollutants?

Most pollutants are much too small to see without a microscope, but they still get into our lungs and affect our health.

The main pollutants in the Central Okanagan are Ozone (O_3), Nitrogen Oxides (NO_x) and Fine Particulate matter ($PM_{2.5}$).

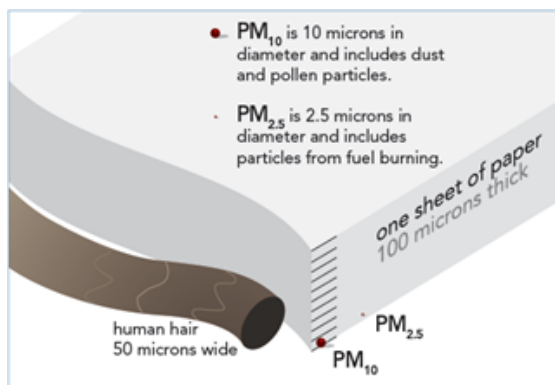
What is air pollution?

Air pollution is anything that causes the air to become dirty or contaminated with pollutants at levels that are harmful to our health.

What makes air dirty?

Generally, air pollution comes from the burning of fossil fuels such as coal, oil, natural gas, gasoline, wood or diesel. This happens when we use energy supplies to do everyday activities such as cooking, doing the laundry at home or travelling by cars or trucks.

In 2007 burning in open fields and residential wood burning were identified as the main causes of degraded air quality in the Central Okanagan. However, recent Green House Gases (GHG) emissions data highlights the increasing importance of vehicle emissions.



Major Sources of Community GHG emissions in Central Okanagan:

Personal vehicles	48%
Commercial vehicles	15%
Buses	6%
Residential Buildings	19%
Commercial Buildings	10%
Large Industrial Buildings	2%



Air Pollution today

When you think of air pollution, we should also think of transportation, especially cars and trucks. Today there are about 169,000 vehicles registered in the Central Okanagan and more than 90,000 are on the road on a typical weekday.

The fuel they use - gasoline and diesel - cause harmful gases to be ejected from their exhaust. These gases can be very dangerous for children.



[Click here](#) to check current Air Quality Health Index in Central Okanagan.

How does air pollution affect you?

We come into contact with many kinds of air pollutants every day. They are being released in our neighbourhoods, our backyards, inside our homes and are eventually finding their way into our lungs. Outdoor pollutants seep into houses, even through closed doors and windows.

Air pollution is known to cause breathing problems, lung and heart diseases, and aggravate conditions such as asthma. Children are particularly at risk as their bodies are less resilient and the pollutants have a more concentrated effect.

Air pollution can:

- Affect your immune system so that you catch infections more easily.
- Make you cough, wheeze, sneeze, feel dizzy and it can make your eyes itch.

The 2020 BC State of the Air report updated estimates of the health impacts of air pollution. Using the Air Quality Benefits Assessment Tool, they estimate that 1,600 premature deaths in B.C. in the year 2015 can be linked to air pollution (i.e. fine particulate matter, nitrogen dioxide and ozone) from all sources, with an economic valuation of \$11.5 billion per year.

Nationally, the health burden of air pollution was estimated at 14,600 premature deaths, 2.7 million asthma symptom days, and 35 million acute respiratory symptom days, with a total economic valuation equal to \$114 billion per year.

The City of Kelowna, the City of West Kelowna, the District of Lake Country, the District of Peachland, the Westbank First Nation and the Regional District of Central Okanagan worked in partnership to develop a **Central Okanagan Clean Air Strategy** with the vision of clean and healthy air for current and future generations.

If you want to know more about the region's air quality programs, please visit:

www.rdco.com/airquality

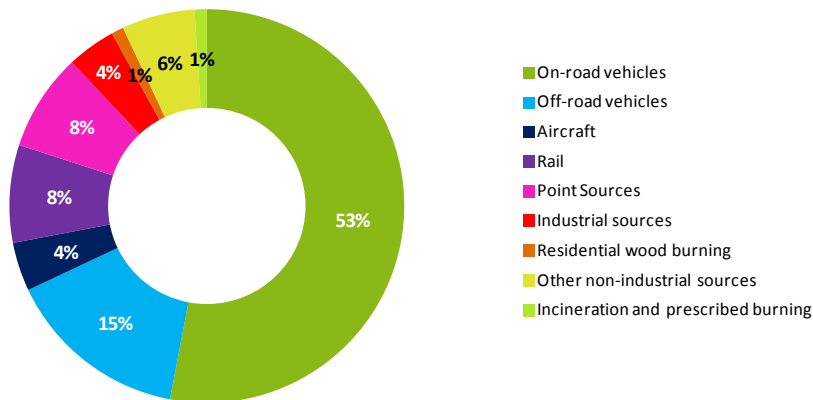
Contact:
airquality@kelowna.ca



Let's Review Air Pollutants

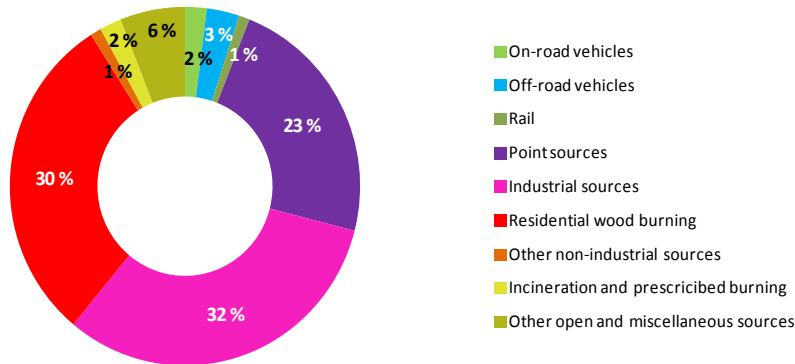
NO_x (Nitrogen Oxides) - NO₂ contributes to acid rain, which damages trees and the stone on buildings. You can see the effect of NO₂ on a hot summer day when it combines with other chemicals to make the sky look heavy and a brownish grey.

Sources of NO_x in Central Okanagan



PARTICULATE MATTER (PM_{2.5}) - are tiny particles of dust and soot that are released into the air. When you breathe them in, they settle in the lower parts of your lungs.

Sources of Fine Particulate Matter (PM_{2.5}) in Central Okanagan



OZONE (O₃) - is a colourless, odourless, gas made up of three oxygen atoms. Ozone can form in two places;

- 1) High up in the atmosphere
- 2) Right down at ground level

When it's up high in the ozone layer it is "good" ozone and acts like a sunscreen for the Earth - blocking most of the Sun's harmful ultraviolet rays. When it's near the ground it's bad ozone which can effect our environment and our economy by damaging ecosystems, vegetation and accelerating global climate change.