

## **Cowichan Region Airshed Fact Sheet**

Fine particulate matter (PM<sub>2.5</sub>) is the contaminant of greatest concern to local air quality. These particles are extremely tiny and can travel deep into the lungs and become stuck. PM<sub>2.5</sub> air pollution has been linked to an increased incidence of heart disease, lung disease and in some cases premature death.

To augment the provincial ambient monitoring network in the valley, the Cowichan Valley Regional District (CVRD) and partners have installed PurpleAir PM<sub>2.5</sub> sensors in neighbourhoods across the Cowichan region. The sensors are intended to build awareness for air quality, provide information on the distribution of wood smoke within our communities and identify opportunities to improve the air we breathe. To check local air quality online with the PurpleAir Map, please visit: [www.cvr.bc.ca/air](http://www.cvr.bc.ca/air).

### Air Quality

Recent air quality data for communities in the region indicate:

- Exceedances of the daily provincial PM<sub>2.5</sub> objectives (25 ug/m<sup>3</sup>) from 2009 to 2016
- Exceedances of the annual provincial PM<sub>2.5</sub> objective (8 ug/m<sup>3</sup>) from 2010 to 2015
- High levels of PM<sub>2.5</sub> were primarily linked to local open burning and wood burning appliances (winter), and forest fires located in other regions (summer)

### Emissions Sources

77% of the total PM<sub>2.5</sub> in the region is coming from area sources according to estimates from a 2014 emissions inventory (see: <https://www.cvr.bc.ca/DocumentCenter/View/65427>).

- Open burning accounted for 53% of the total PM<sub>2.5</sub>
- Wood burning appliances accounted for 23% of the total PM<sub>2.5</sub>
- The remaining 24% of the total PM<sub>2.5</sub> is primarily emitted by point sources (a single, stationary source of pollution, such as an industrial facility) and mobile sources (on road vehicles, off road vehicles, marine vessels)

### Health

There is scientific evidence at a national level of a strong link between PM<sub>2.5</sub> levels and impacts on human health. PM<sub>2.5</sub> can make it harder for people to breathe, make existing lung or heart-related symptoms worse and trigger heart attacks.

Recent information from Island Health for the region indicates:

- Admissions rates for children with respiratory diseases in the Cowichan Local Health Area were 70% higher than provincial rates in 2014/15
- In 2014/15, the proportion of persons aged five to 54 diagnosed with asthma was 12% higher in the CVRD than the rest of BC
- The prevalence of chronic respiratory illness for all persons aged 45 and over was 64% higher in the CVRD than the rest of BC

### What you can do

Here are some suggestions on how you can help improve air quality in the region:

Reducing your home heating emissions:

- If you heat your home with a wood-burning appliance, only burn dry, seasoned wood. Make sure to collect your firewood early in the year and keep it under cover to allow it to season at least six months before being burned.
- Take advantage of the woodstove exchange program and [upgrade your woodstove](#) to an EPA-certified appliance or to a cleaner non wood-burning appliance.
- Consider using cleaner forms of residential heating including a heat pump or a heating appliance that is fueled by propane, natural gas or pellets.

Reducing emissions from open burning:

- Recycle yard and garden materials at several convenient locations in the CVRD
- If you have to burn, only burn when the [Venting Index](#) is good. The Venting Index is a measure of how well the atmosphere can disperse smoke. To find the Venting Index for the Cowichan Valley, use the Southern Island area (SRN VAN ISLD). The venting index can be found at: <http://www.env.gov.bc.ca/epd/epdpa/venting/> or you can also call the Venting Index hotline at 1-888-281-2992.
- Never burn garbage

More information

To monitor your air quality and learn more, please visit: [www.cvrld.bc.ca/air](http://www.cvrld.bc.ca/air)