



Kamloops Physicians for a Healthy Environment Society

Our Mission: Kamloops Physicians for a Healthy Environment is dedicated to protecting the health and well-being of the citizens of Kamloops by promoting health education and science-based interventions that result in maintaining and improving the environment.

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KPHES Media Release

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KPHES: KPHES is a registered society in British Columbia. It is composed of medical doctors, allied health professionals, scientists, and Thompson Rivers University professors.

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Products: The current and all past studies have been loaded onto the website: www.kphe.ca

REPORT ON THE 2015 AIR QUALITY IN KAMLOOPS

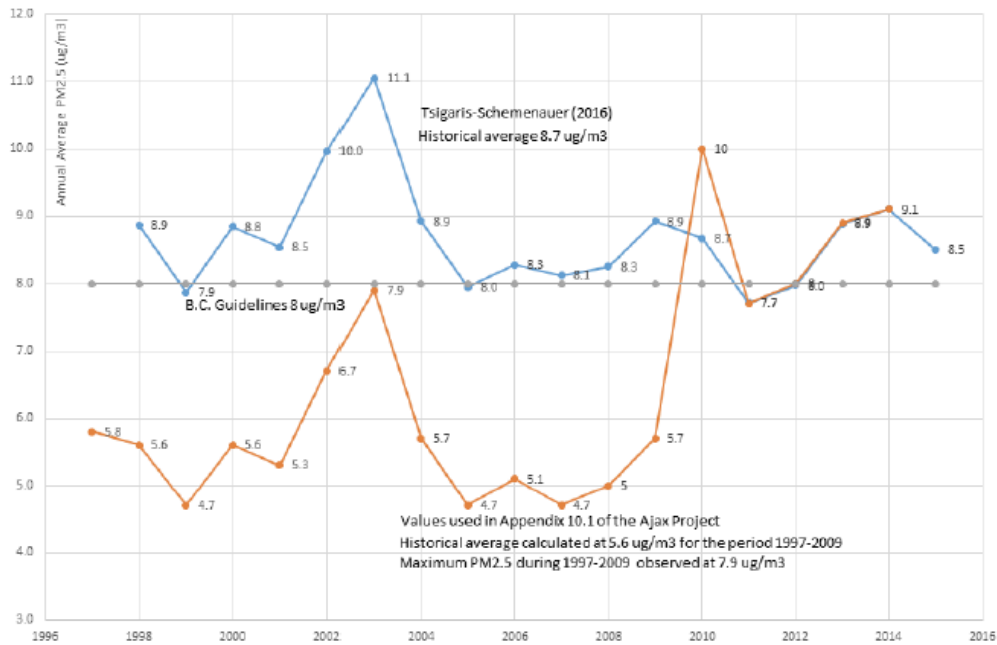
Need to care for our air – renewed push for Airshed Management

This is the fifth in a series of reports written by KPHES members to inform the public, politicians and government decision-makers on the quality of the air in Kamloops. August forest fires and November slash burning contribute to making the PM_{2.5} values in Kamloops highly elevated. November 2014 was even worse than August that year, attributable to slash burning in November when venting conditions were suboptimal. In 2015 it was the other way around, with August slightly worse than November 2015. The mean annual PM_{2.5} for 2015 was 8.5 ug/m³, slightly below the long-term average of 8.7 ug/m³. Of the 18 years of record, 14 are over the BC Air Quality Objective of 8.0 ug/m³ and all 18 are well over the BC Planning Goal of 6.0 ug/m³.

Tsigaris and Schemenauer (2014b) reviewed the issue of technological changes at the BC MOE Federal Building air quality monitoring station. There was a switch from the older and less accurate TEOM units to the newer and more accurate BAM units in 2010. A statistical analysis was required to adjust the data. It is universally accepted by the World Health Organization, Environment Canada, the BC Ministry of the Environment, the BC Lung Association, and others that the TEOM data are low compared to those obtained from the BAM instrument. You cannot put them on the same graph without adjustment or else the higher readings from the BAM units would make it appear that the air quality took a real turn for the worse. The numbers for Kamloops, once corrected, reflect a consistently high annual average concentration of PM 2.5 for all years it was monitored.

It was noted that the KGHM Ajax application reported a long term (1997 to 2009) average PM_{2.5} value of 5.6 ug/m³, which used the old unadjusted TEOM data. To inform the public, this report shows a comparison between the annual average PM_{2.5} as used by KGHM Ajax and the full data set when all TEOM data are adjusted to conform with the modern BAM data.

Figure 4: annual average values of PM_{2.5} for downtown Kamloops for the period from 1997 to 2015. The upper line (in blue) shows values calculated according to the method of Tsigaris and Schemenauer (2014b). The lower line (in red) shows values as used by KGHM Ajax in their application for the proposed mine on the edge of the city of Kamloops



Data from the new monitor at the Aberdeen station has been reported on in detail in Tsigaris and Schemenauer (2016a), put out as a KPHEs media release, Jan 7, 2016. It will take at least a year’s worth of data to be able to make firmer statements about data from the Aberdeen site but the average PM2.5 from this station for the 2.5 months it was operational in 2015 was 5.1 ug/m³. During the same time interval, the downtown monitor’s average was 10.0 ug/m³. The data sets show that the air quality at the two sites changes in a correlated way, so to a first approximation, when Aberdeen PM2.5 goes up it also does so downtown, both are affected by the industrial emissions and fires in our area of the province.

When you look at the other pollutants measured at the Federal Building Site in Kamloops, Kamloops does well, though there is seasonal variability. We are below the guidelines for Nitrogen Oxide (NO), Nitrogen Dioxide (NO₂), Sulphur Dioxide (SO₂), and Ozone (O₃). The major problem with Kamloops air quality remains the airborne fine particulate concentrations, PM_{2.5}.

The report also compares Kamloops to other cities in the Interior of BC for 2015. Kamloops is at a fork in the road. Making a choice to add a significant source of fine particulate emissions to our airshed will make Kamloops even worse in air quality as compared to Kelowna and Vernon, and may also make us worse than Prince George in terms of airborne fine particulate concentrations.

When it comes to clean air, pure water, and healthy food – we take these for granted and we should not. These basic essentials need protection and management. We strongly suggest an increased mandate as well as greater support for the Kamloops Airshed Management Committee, increased monitors producing real-time, valid air quality data, and pro-active use of these data as the City of Kamloops moves forward. These actions are very important in the protection of the health of the people in our city.