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Wood Stove Air Quality Survey Results

Need to reduce smoke pollution continues

With 45 of Campbell River's old smoky belchers in the recycling heap, the City's Wood Stove Exchange program came to an end on June 30.

"Each replacement of an old, inefficient wood burning appliance with a new Environmental Protection Agency/Canadian Standards Association-certified unit brings a reduction in fine particulate air pollution, and we can all breathe a little easier," says Mayor Charlie Cornfield.

The City's wood stove exchange program also included a mobile air quality monitoring component. *"With the preliminary results in, we are pleased to see that levels of fine particulate matter are generally very low,"* says Councillor Roy Grant, liaison to the City's Environmental Advisory Commission. *"However, the results also confirm that there are a number of low-lying areas within the City that are 'hot spots' for wood smoke pollution, and we should continue to work toward achieving the best air quality possible for our residents."*

The air quality monitoring surveys were conducted January through March, 2010 by staff using a mobile nephelometer or "Nephie." Air sampling occurred between 6 and 8 p.m. on clear, still evenings. Wood smoke tends to settle and may build over the evening hours under these weather conditions.

"Separate readings recorded at the Campbell River Dogwood Ambient Monitoring Station found average smoke levels peaked around midnight, sometimes more than twice the levels recorded by the nephelometer," says Earle Plain, an Air Quality Meteorologist with the Ministry of Environment. Real-time air quality readings for the Campbell River station can be found at <http://www.bcairquality.ca>.

Eleanor Setton, PhD Environmental Exposures with the University of Victoria's Spatial Sciences Research Lab, found the City's fine particulate data to be low at less than 15 micrograms. *"In other areas when we monitor evening wood smoke, hot spot levels are more typically 20 to 40 ug/m3,"* she says. *"It would be interesting to see nephelometer readings for later evening surveys."*

Dr. Setton's advice has led the City's Environmental Advisory Commission to support continuing air quality surveys this coming winter and a commissioner has volunteered to conduct the surveys.

The Vancouver Island Health Authority (VIHA) recognizes that fine particulate air pollution is a contributor to many types of diseases, especially lung and heart disease. *"Fine particulates are considered the most important outdoor air pollutant from a public health perspective,"* says Dr. Charmaine Enns, VIHA's Medical Health Officer for North Island.

Earlier this month, VIHA and the Ministry of Environment issued a wildfire smoke advisory for the east coast of Vancouver Island. At times, levels of fine particulate matter measured at the Dogwood Ambient Monitoring Station were up to three times higher than peak levels recorded during winter wood burning. During a smoke advisory, residents with heart or lung conditions should reduce their levels of activity and if their symptoms worsen contact their health care provider, walk-in clinic or emergency department for advice.

To view the air quality survey results, please visit the *What's New* section on the City of Campbell River website, www.campbellriver.ca.

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Contact: Terri Martin, Environmental Coordinator 250-286-5711
