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N.H. Air Pollution Monitors Picking up Strong Signals from Fires in Quebec

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DURHAM, N.H. -- When Professor Robert Talbot at the University of New Hampshire noticed that carbon monoxide measurements from three air pollution monitoring sites in different locations around the state were unusually high, he had not yet heard about the forest fires blazing in Quebec. The atmospheric chemist knew something was wrong, however, because clean Canadian air should have been observed on the monitors with the arrival of cooler temperatures this past weekend.

"This is the highest concentration we've ever seen since we started monitoring two years ago," says Talbot, the principal investigator of the Atmospheric Investigations, Regional Monitoring, Analysis, and Prediction (AIRMAP) program -- a cooperative institute between UNH's Institute for the Study of Earth, Oceans, and Space and the National Oceanic and Atmospheric Administration (NOAA) "It takes eight hours of 9,000 parts per billion to exceed the Environmental Protection Agency's standard, and this is not anywhere near that. However, this level of carbon monoxide in the atmosphere could cause a runner to get a headache and lose some ability to think clearly."

AIRMAP is studying the sources of a wide variety of air pollutants in New England. Carbon monoxide, created in combustion and therefore a tracer of fire, is one of the pollutants being studied.

A typical reading for carbon monoxide on a normal day in New Hampshire is 100 to 200 parts per billion. On Monday, the readings went up to 750 parts per billion

and now are down to 300 parts per billion, which, according to Talbot, is still rather high. He says the drop is likely because of a change in wind direction rather than a reduction in the Canadian fires.

The readings on ozone and particulate matter also have been high because of the fires. On Mount Washington, AIRMAP picked up an ozone reading of 85 parts per billion, which, if experienced for eight hours, would exceed the government's health standard. The amount of particulates in the air also has been extremely high, at a level 10 times higher than normal.

"That is why it has been hazy the last few days," Talbot says. "As the sunlight passes through a layer of heavy aerosols in the lower atmosphere as it rises and sets, it looks red. The smoke from the fires is pouring right down from Canada. They could even smell smoke in Washington, D.C., from these fires."

To view today's AIRMAP measurements, go to <http://athena.sr.unh.edu/airmap>.

To view the path of smoke-laden wind from the Canadian fires, go to http://www.osei.noaa.gov/Events/Fires/CAN_Que.

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