



New Developments in Wildfire Pollution Forecasting at the Canadian Meteorological Centre

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Environment and Climate Change Canada's air quality forecast system with near-real-time wildfire emissions, named FireWork, was developed in 2012 and has been run by the Canadian Meteorological Centre Operations division (CMCO) since 2013. In June 2016 this system was upgraded to operational status and wildfire smoke forecasts for North America are now available to the general public. FireWork's ability to model the transport and diffusion of wildfire smoke plumes has proved to be valuable to regional air quality forecasters and emergency first responders.

Some of the most challenging issues with wildfire pollution modelling concern the production of wildfire emission estimates and near-source dispersion within the air quality model. As a consequence, FireWork is undergoing constant development. During the massive Fort McMurray wildfire event in western Canada in May 2016, for example, different wildfire emissions processing approaches and wildfire emissions injection and dispersion schemes were tested within the air quality model. Work on various FireWork components will continue in order to deliver a new operational version of the forecasting system for the 2017 wildfire season. Some of the proposed improvements will be shown in this presentation along with current and planned FireWork post-processing products.