Status, Current Developments, and Perspectives of ECCC's Operational AQ Forecasting System with Near-Real-Time Wildfire Emissions

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Environment and Climate Change Canada's air quality forecast system with near-real-time wildfire emissions was developed in 2012 and has been run by the Canadian Meteorological Centre Operations division (CMCO) since 2013. Some of the most challenging issues with wildfire pollution modelling concern the treatment 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 May 2016, for example, different wildfire emission processing approaches and wildfire emissions injection and dispersion schemes within the air quality model were tested. 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 these potential improvements will be shown in this presentation.

CMCO has also developed different post-processing tools for FireWork that are currently available only to ECCC AQ forecasters and select users. Starting next year, however, some of these products will be available to the general public. Current and future FireWork post-processing products will be covered in the presentation.