

Interactive comment on “Local and regional smoke impacts from prescribed fires” by Owen F. Price et al.

Anonymous Referee #1

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This is a basic, preliminary and opportunistic study of smoke pollution from two planned fires in the Sydney Basin airshed. The study design hinges on unsystematic ground level particulate measurements that were located at different levels of proximity to the fires that were taken at different times of day, and unfortunately not through the night, using a variety of instruments (where corrections were required for the portable monitor). Average 24-hour values were imputed using some conservative assumptions. Their sketchy data were combined with incorporating relevant meteorological data, urban airshed pollution measurements and some carbon monoxide measurements from a nearby by coal mine. The data analysis is very competent and makes the most out of a very slight data set. A significant aspect of the study is the comparison with smoke plume modeling from the two fires. The key finding is that smoke plumes can collapse at night and fires that are 700 ha in extent can affect large areas over 150 times bigger

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than the burnt area, and therefore affect lot of people. The authors openly acknowledge the limitations of their study and make some suggestions regarding improved study design. Their findings are highly relevant to current debates about smoke management of planned fires.

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