



Approaches for Addressing Wildfire Smoke In the United States and Canada with Implications for Integrated Fire Management

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ABSTRACT- Where there is fire, there is smoke. Air quality impacts from wildfires have become significant health events in the United States and Canada. These incidents are commonly the highest air pollution exposures that face the American public. The same situation is occurring in Canada. The movement of smoke crossing boundaries is also a common challenge. These impacts are not only high, they are also becoming longer in duration with communities frequently facing multiple weeks of exposure. In 2018, over 3,700 instances of 24 hours above health thresholds for fine particulate occurred in the Western U.S. These impacts pose a significant cost to society through health effects and disruption of normal activities for both vulnerable and healthy populations. The USDA Forest Service has been leading the development of the Interagency Wildland Fire Air Quality Response Program to address the air quality impacts of wildland fires on the American public. The Program utilizes emergency deployable air quality monitoring equipment, state of the art wildland fire smoke dispersion models, and development of specialized Air Resource Advisors (ARAs) for dispatch to ongoing wildfires to develop publicly available and disseminated smoke impact forecasts. In Canada, efforts are underway at federal, provincial and First Nation levels to address smoke impacts. Approaches in both countries mutually support pre-fire preparation for smoke and direct response to incidents. The lessons learned and tools to support wildfire smoke planning and response have broader applicability for Integrated Fire Management. As the public learns of the health impacts of wildland fire smoke and how to protect themselves from such air pollution, they are building preparation and readiness for smoke from less smoke-filled prescribed fires. A prepared public, especially those who are vulnerable and frequently vocally opposed to use of fire due to smoke concerns, will facilitate more use of fire in controlled settings and prescribed fires which will aid overall Integrated Fire Management objectives.

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