



What is needed to mitigate wildfire smoke health effects from a public health decision maker perspective

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Wildland Fires: Towards Improved
Understanding and Forecasting of Air Quality
Impacts – A Workshop
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Photo credit: Shana Ursula Dieterle

Public health's role during a smoke event

Communication

- Health advisories
- Smoke outlooks
- Advice for reducing exposure
- Response to public inquiries

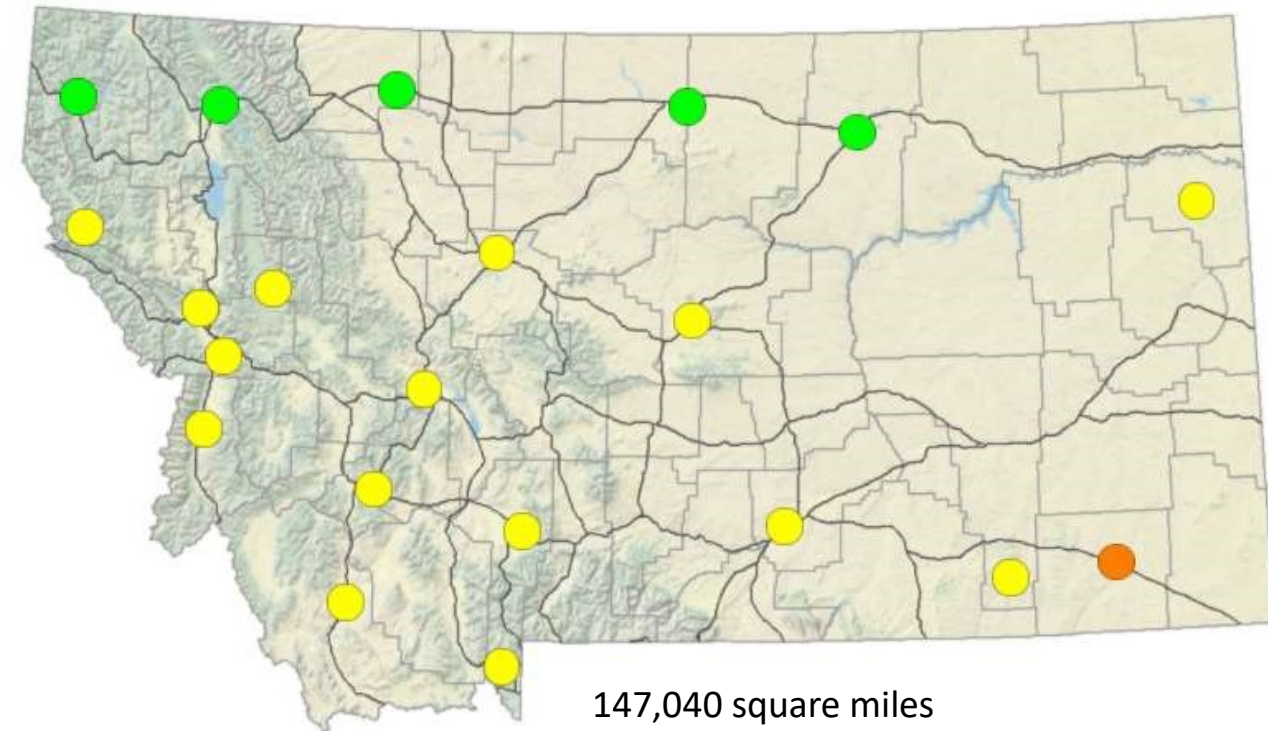
Intervention

- Cleaner air shelters
- Provide portable air cleaners or N95s

Policy

- Cancel/postpone events
- Close schools
- Set up safeguards for outdoor workers

We need a clear picture of current and future air quality conditions



147,040 square miles
20 Permanent PM_{2.5} monitors
16 Citizen Science Purple Air Sensors

- More monitoring
 - Ex: Low-cost sensors in remote locations
- Smoke forecasting
 - Timing
 - Intensity
 - Duration

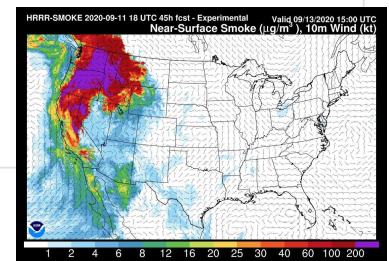




Photo credit: Candace Coefield

We need answers to health questions

- PM_{2.5} health advisory categories trigger decisions, particularly for daycares, preschools, K-12 schools and outdoor activities for (hopefully) all age groups
 - What does smoke exposure mean for different age groups?
 - How much smoke is too much?
 - Can a healthy adult exercise in wildfire smoke? What about college kids? High school students?
 - How do you balance risks?
 - COVID-19
 - Lack of physical activity
 - Mental Health



Photo credit: Sarah Coefield

We need effective communication

- How do you make sure everyone in the community knows where to find the information they need about wildfire smoke?
- What does effective communication look like?
- How can communication lead to behavior changes?
- How can you battle misinformation?



Stay healthy during wildfire season

Wildfire smoke can get inside your home. Exposure to air pollutants in wildfire smoke can irritate the lungs, cause inflammation, alter immune function, and increase susceptibility to respiratory infections, likely including COVID-19.

WHEN SMOKE ROLLS INTO TOWN:



Be sure to shut your doors and windows.

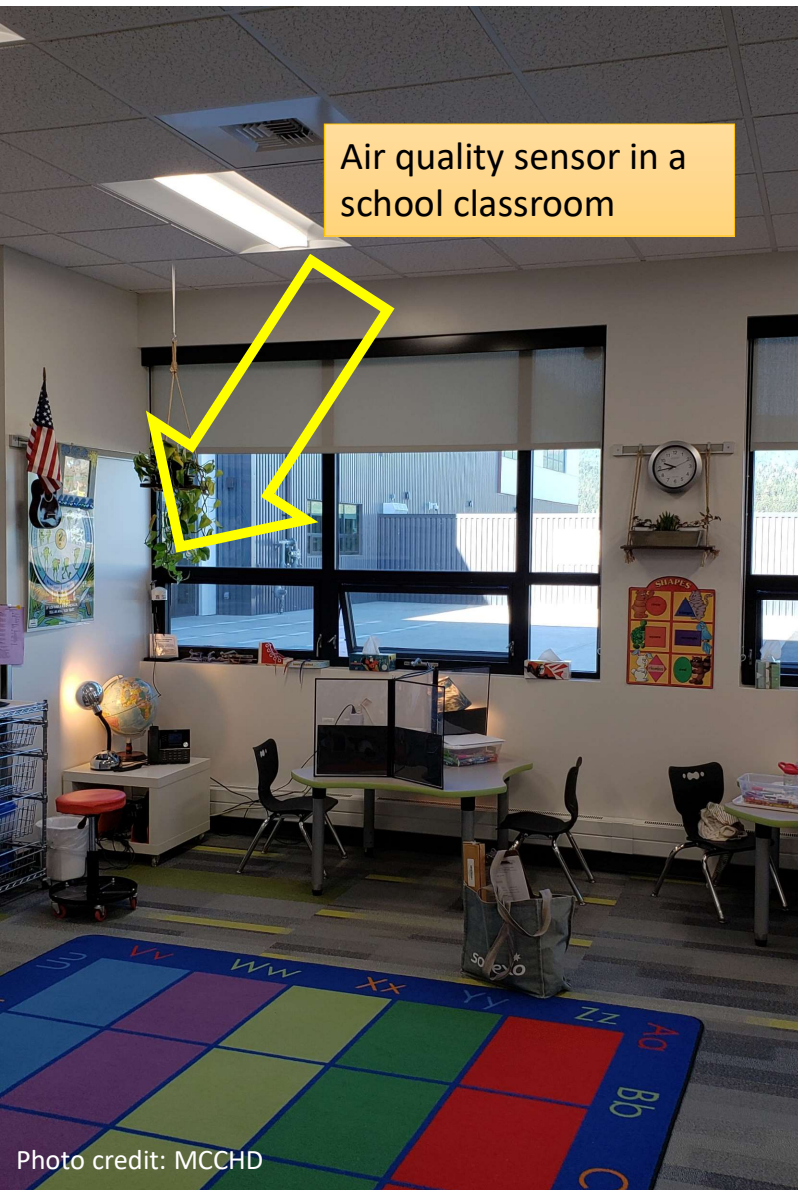


Use a HEPA portable air cleaner, box fan/filter combo or high efficiency filters in your HVAC system to clean your indoor air.



Check local air quality at [TodaysAir.mt.gov](https://www.montanawildfiresmoke.org) or look outside. If you cannot see at least five miles, the air is unhealthy — stay inside in cleaner air as much as possible.

Learn more and prepare at montanawildfiresmoke.org



We need to know indoor air quality during smoke events

- Indoor air quality can quickly match outdoor air quality in commercial and public buildings.
- Need: Air quality sensors in indoor locations to help guide decision making
- Need: Data on the effectiveness of different air cleaning methods in homes, businesses and public facilities

Photo credit: MCCHD



We need to know the most effective and sustainable interventions

Interventions are a matter of equity. Current interventions include establishing cleaner air shelters, and/or distributing portable air cleaners, DIY fan/filter combos, and N95s.

- What is the most effective intervention?
- What is the most sustainable intervention?
- Is one preferable for short term vs long duration smoke events?
- How do you decide who gets help?
- **Where will funding come from?**



We need data-driven policy changes

- Building codes
- Worker protections
- Requirements in place of guidelines





Summary

- Protecting the public from wildfire smoke encompasses communication, intervention and policy implementation.
- We need to know current and predicted smoke levels in more locations
- We need to know what works best to protect the most people for the least amount of money.
- We need the political will to implement policy changes that better protect the public.
- We need a dedicated funding source for wildfire smoke protection

Questions?

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*photography
by shannon*