



Ministry of
Environment and
Climate Change Strategy

Smoke From Open Burning

Why do we care?

How can it be reduced?



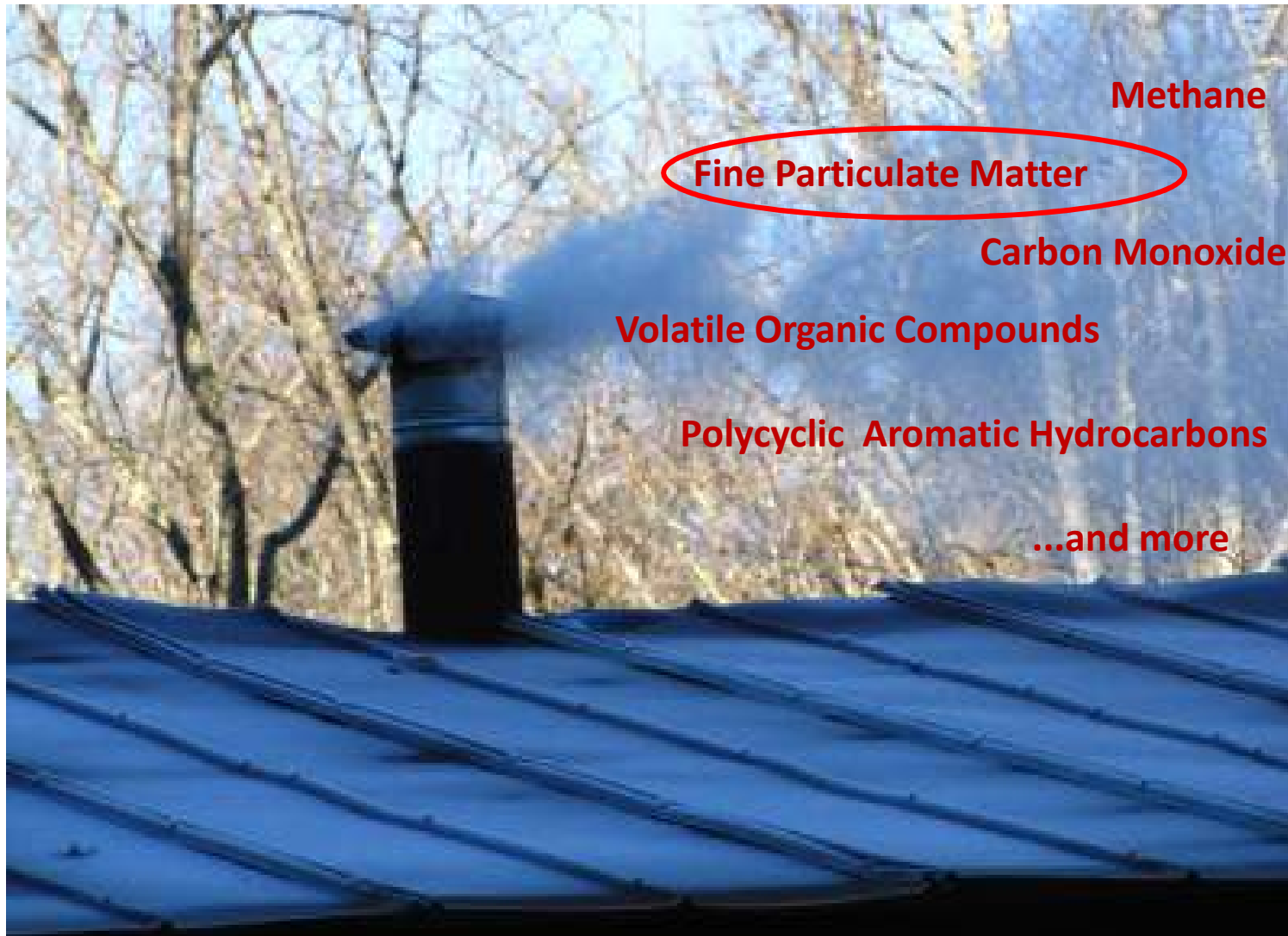
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Outline

- Health Effects of Wood Smoke
- Wood Smoke in BC
- The Open Burning Smoke Control Regulation (OBSCR)
- Regulatory Review



What pollutants are emitted from biomass burning?



Fine Particles - PM2.5

- Small combustion particles that reach deep in the lungs
- increase risk of hospitalization and death from heart and lung diseases
- No “Safe” level of exposure

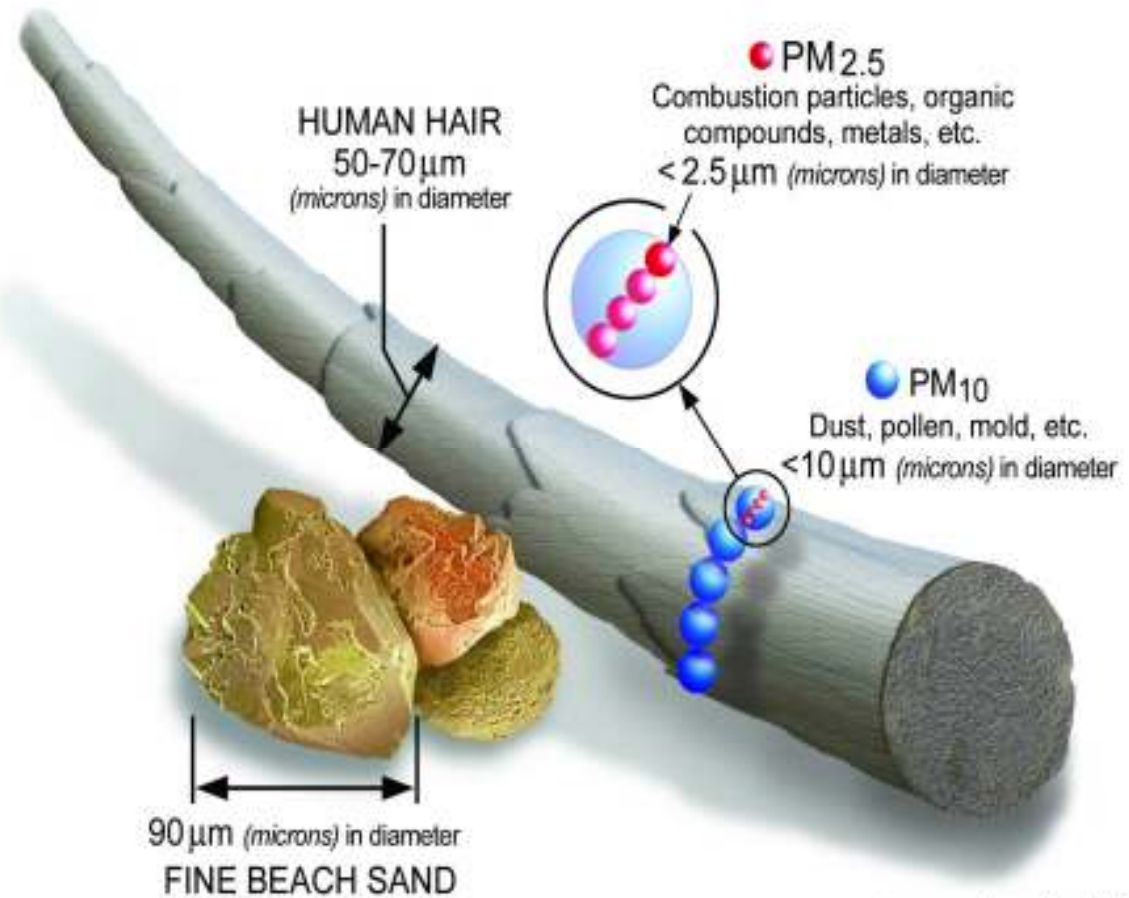
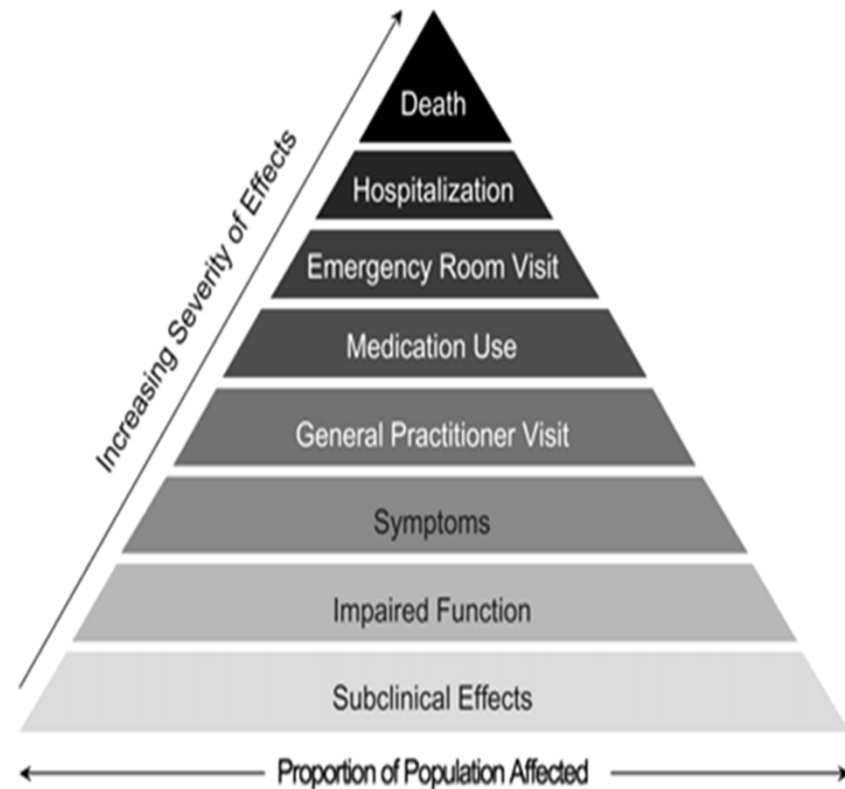


Image courtesy of the U.S. EPA

Air pollution and heart disease

- On days with worse air quality, more people die (out-of-hospital, >65 yrs.)
- In more polluted cities, people die earlier than in less polluted cities...
- ...and, in the most polluted areas of cities, there is an increased risk of dying

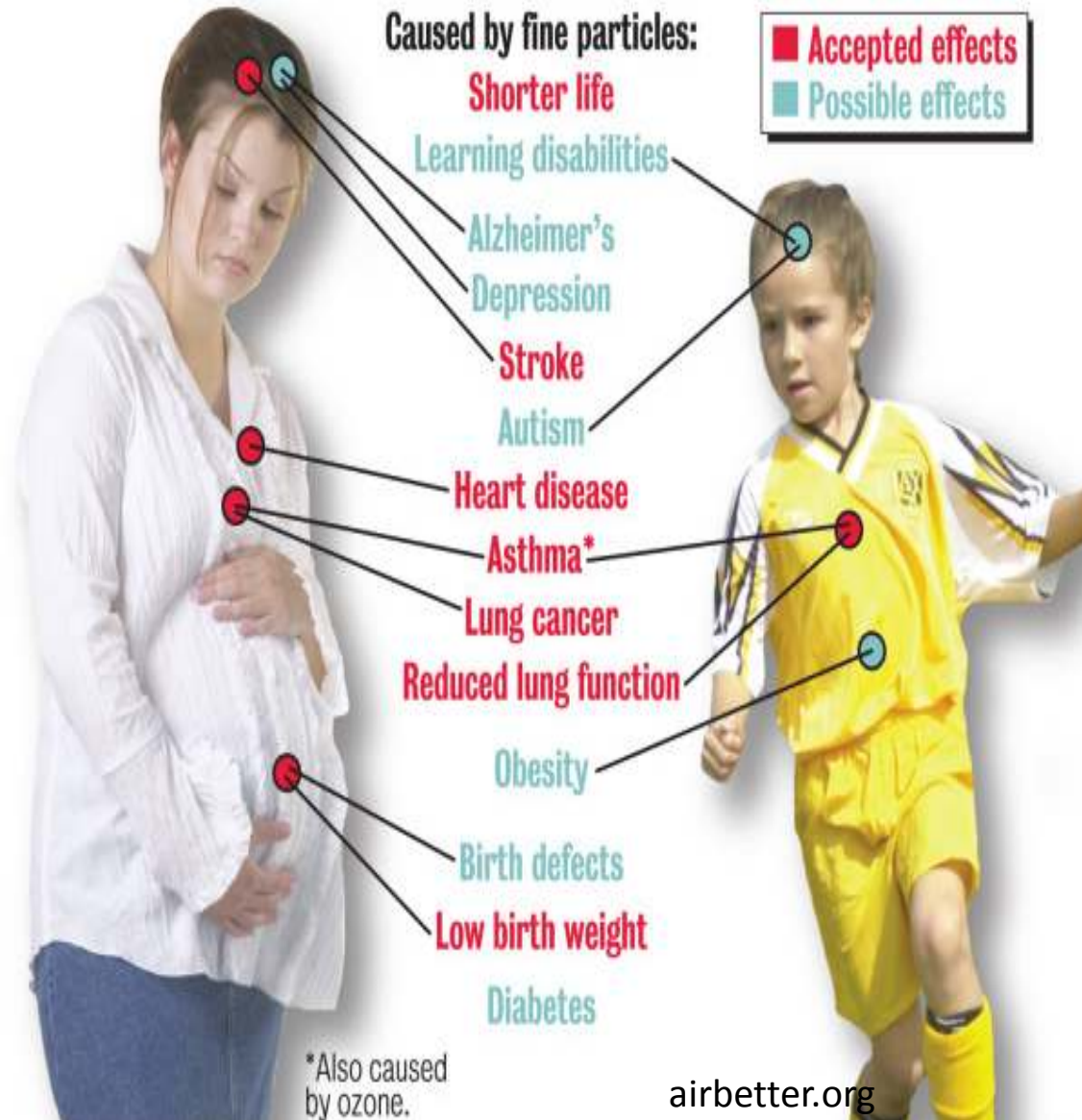


Adapted from Dr. Michael Brauer

Effect of PM2.5

- The most prominent detrimental health effects of ambient PM2.5 air pollution for hospital admissions and mortality have been observed in the cardiovascular system
- Local effect on the lining of airways that activates an inflammatory response.
- Systemic impact:
 - Directly and indirectly into bloodstream
 - inflammatory response.
- Immune cell types are stressed and activated, altering their ability to function normally.

It affects all aspects of human health

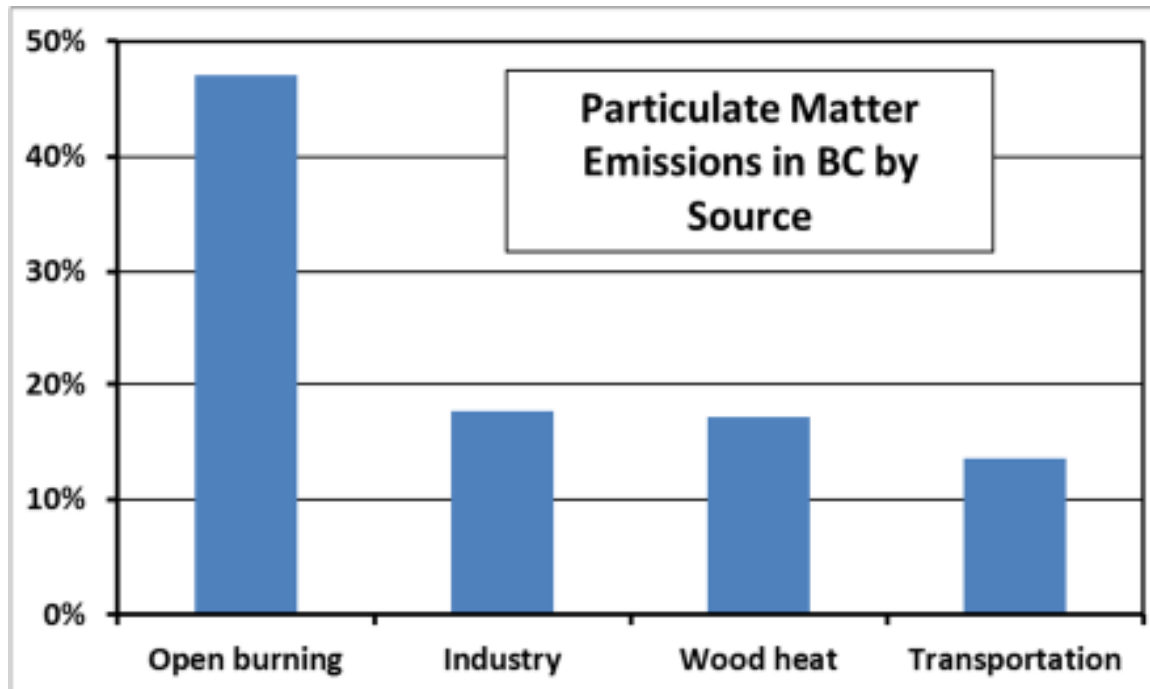


Biomass Burning Sources in B.C.

- Forest Fires – (both natural and human caused)
- Open burning (forestry waste, fire hazard reduction, prescribed fire, land clearing)
 - Includes “backyard burning”
- Domestic (Wood Heat and Cooking)
- Commercial/Institutional – heating, district energy
- Industrial (for steam, process heat, and waste disposal)

What is the issue with open burning?

- Open burning is the largest source of fine particulate matter (PM_{2.5}) pollution in BC. It can contribute to poor air quality in communities.



Air Quality in BC

- Six communities in the province exceeding national air quality standards (CAAQS) for fine PM.
- 3 Central Interior, 3 Vancouver Island
- Wood smoke is a key cause
 - Open Burning
 - Residential wood combustion
- Commitment to work with communities to achieve standards.

Smoke Reduction Strategies in BC

- Solid Fuel Burning Domestic Appliance Regulation
 - aka SFBDAR, aka the woodstove regulation
- Open Burning Smoke Control Regulation (OBSCR)
 - Currently being revised to tighten restrictions on burning near populated areas
- Provincial Wood Stove Exchange Program
 - Education and incentives to encourage replacement of non-certified appliances with newer cleaner burning appliances



The Open Burning Smoke Control Regulation

- Essential for managing open burning since open burning is a prescribed activity under EMA.
- Authorization by regulation
- Not just a regulation on the forest industry, OBSCR affects anyone burning vegetative debris.
 - e.g. land clearing and development, farmers, right of ways, rural residents, other resource activities, local governments, etc.



How does the OBSCR work?

- OBSCR does not generally forbid burning
 - Provisions are mainly about burning in times and places where smoke impacts will be reduced.
- Ventilation index – Burning when the pollution will disperse
- Setbacks - Burn away residences, schools, hospitals
- Zones with different burning rules – Stricter rules near communities
- Length of burn period – Shorter burn periods lower the risk to air quality
- Requirement to investigate alternate uses – Burning is last resort
- Prohibited materials – Burning only vegetative debris
- Director's authority to temporarily ban burning



Objectives of review

- Improving AQ in communities
- Providing flexibility for burning that is necessary for community wildfire protection
- Simplifying burning requirements in remote areas
- Encouraging cleaner technology
- Improving enforceability
- Bringing the regulation up to date

Information on OBSCR review

<http://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/policy-legislation/legislation-regulation/environmental-protection-regulatory-review/open-burning-smoke-control-regulation>



Current status:

- Latest OBSCR review proposal shared via an intentions paper in 2016.
- Currently preparing maps of smoke sensitivity zones that would be a schedule to the regulation.
- The 2018 proposal keeps most of the features of the 2016 proposal except with changes to the proposed burning requirements in the Low and Medium smoke sensitivity zones.



Risk based requirements proposed in 2016

- Province proposed to be divided into three smoke sensitivity zones (high, medium and low)
- High Smoke Sensitivity Zone around all communities meeting a population density criteria
- Medium Smoke Sensitivity Zone around small communities not meeting the above criteria, rural areas, and transportation corridors
- Low Smoke Sensitivity Zone – rest of the province, locations distant from communities (>20 km generally)
- **Strictest burning requirements in the “High” zone, least strict requirements in the “Low” zone**

Other Important OBSCR changes proposed in 2016

- New provisions to facilitate burning required for “community wildfire protection”
- New provisions for burning diseased debris
- Changes to setbacks
- Provisions for air curtain incinerator use
- Flexibility to vary requirements through “substitution orders”
- Scoping exemptions for backyard burning and agricultural burning

Summarized Burning Requirements

	High Smoke Sensitivity Zone (HSSZ)	Medium Smoke Sensitivity Zone (MSSZ)	Low Smoke Sensitivity Zone (LSSZ)
Current OBSCR	Ventilation index requirements and burn periods are the same province-wide except within municipal boundaries. Good VI day of ignition. Good or fair VI next day. 96 hour burn period.		
2018 Proposal	Shorter burn periods (32 hours), good VI day 1, good or fair VI day 2	Same as current OBSCR	Fair ventilation, unlimited burn period (less restrictive than the current OBSCR)

Are the proposed OBSCR changes “banning” burning?

No:

Areas where it is now legal to burn, it will still be legal to burn.

Stricter requirements in the high sensitivity zone and within setbacks.

Flexibility to allow important burning to occur in places where it is currently not allowed (for fire protection and management of diseased debris).

Next Steps

- Series of 4 stakeholder webinars – Spring 2018 - **complete**
- Complete draft sensitivity zone mapping and share with stakeholders – Spring 2018
- Complete regulatory drafting - Spring and Summer 2018
- Present regulatory proposal to Minister – Summer 2018
- If the regulatory proposal is approved new regulation could be in force as early as Fall 2018

OBSCR Update

- Full text of webinar presentation can be found [here](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/air/reports-pub/obscr_presentation_2018_4_23.pdf):

https://www2.gov.bc.ca/assets/gov/environment/air-land-water/air/reports-pub/obscr_presentation_2018_4_23.pdf



Burning is the last resort

A person who carries out open burning of debris on a parcel of land is exempt from section 6 (2), (3) and (4) of the [Environmental Management Act](#) if:

(c) every reasonable alternative for reducing, reusing or recycling debris has been pursued to minimize the amount of debris to be open burned,

Burning best practices

Goal is to burn hot and quickly during a period of good ventilation

- Consider use of custom ventilation forecast
- seasoning debris in piles prior to burning
- avoid incorporating dirt into piles
- piles should be stacked tall rather than wide
- mix of fine and coarse debris
- minimize stumps in debris to be burned

Comments/questions?

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