



# Residential Wood Smoke

## IN METRO VANCOUVER

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AIR QUALITY PLANNER, AIR QUALITY AND  
CLIMATE CHANGE

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25280445

Presentation to PG Air Clean Air Forum



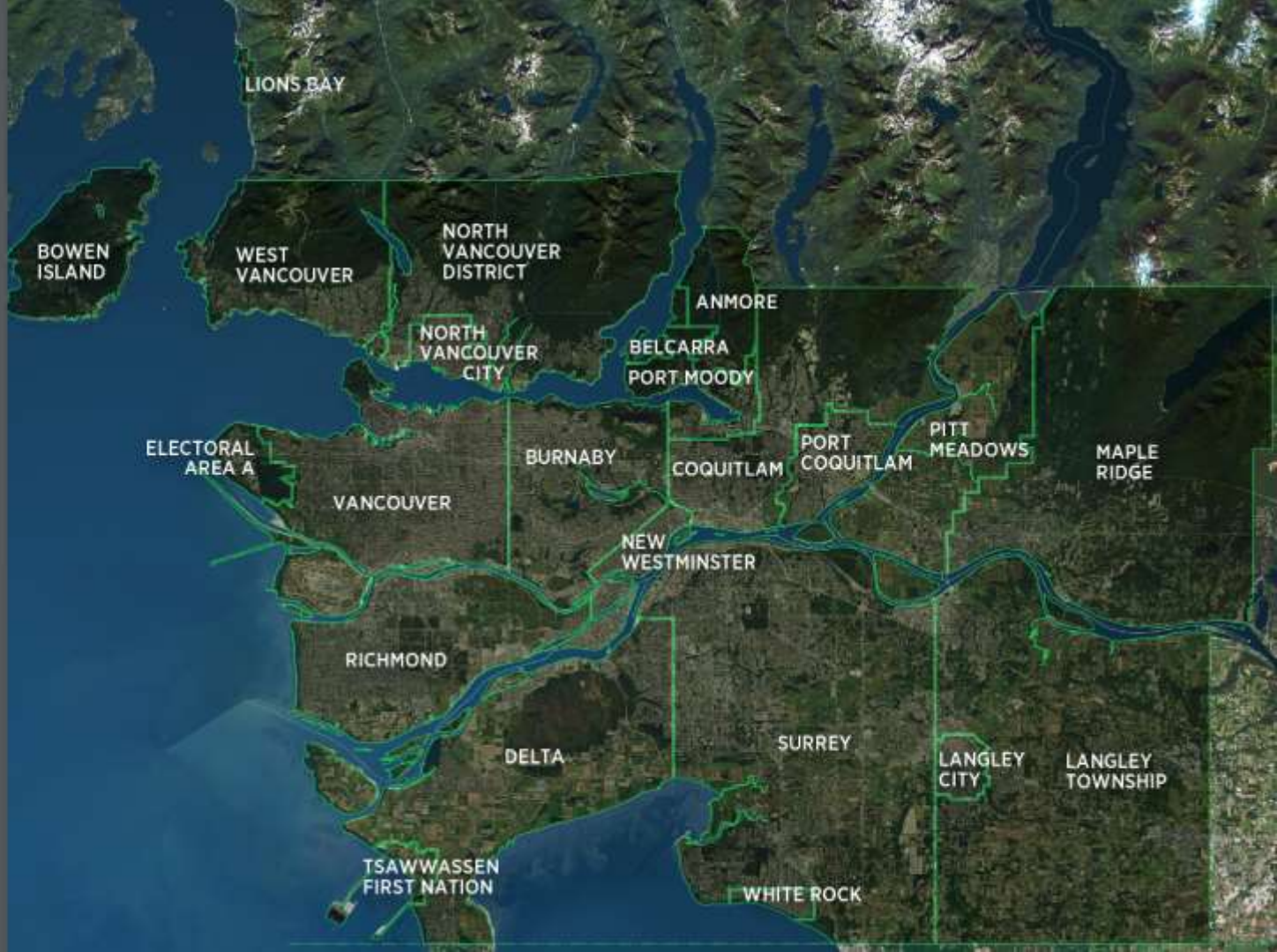
**metrovancover**  
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

**Metro  
Vancouver  
- the  
regional  
context**



# Metro Vancouver

21 municipalities  
one Electoral Area  
and one Treaty First  
Nation working  
together for  
a livable region





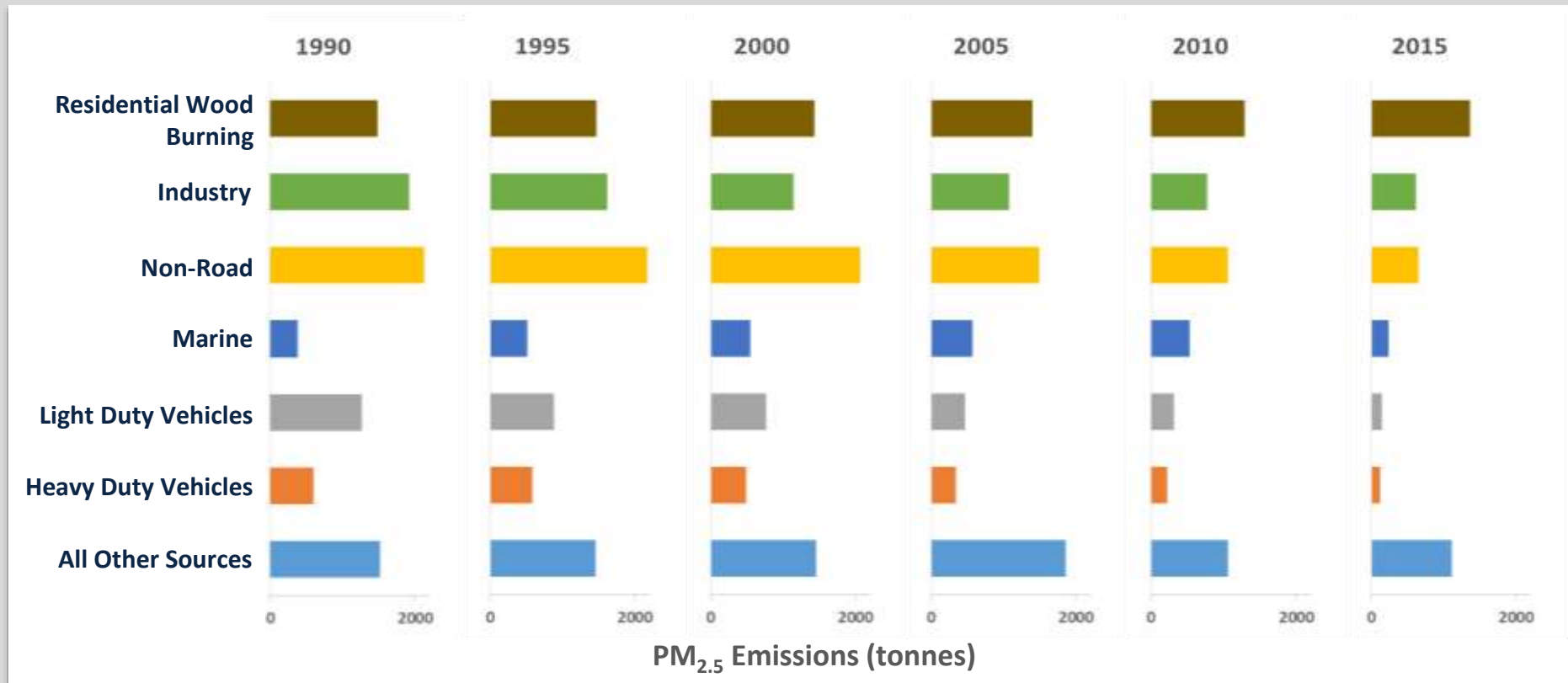
# Wood Smoke Issues

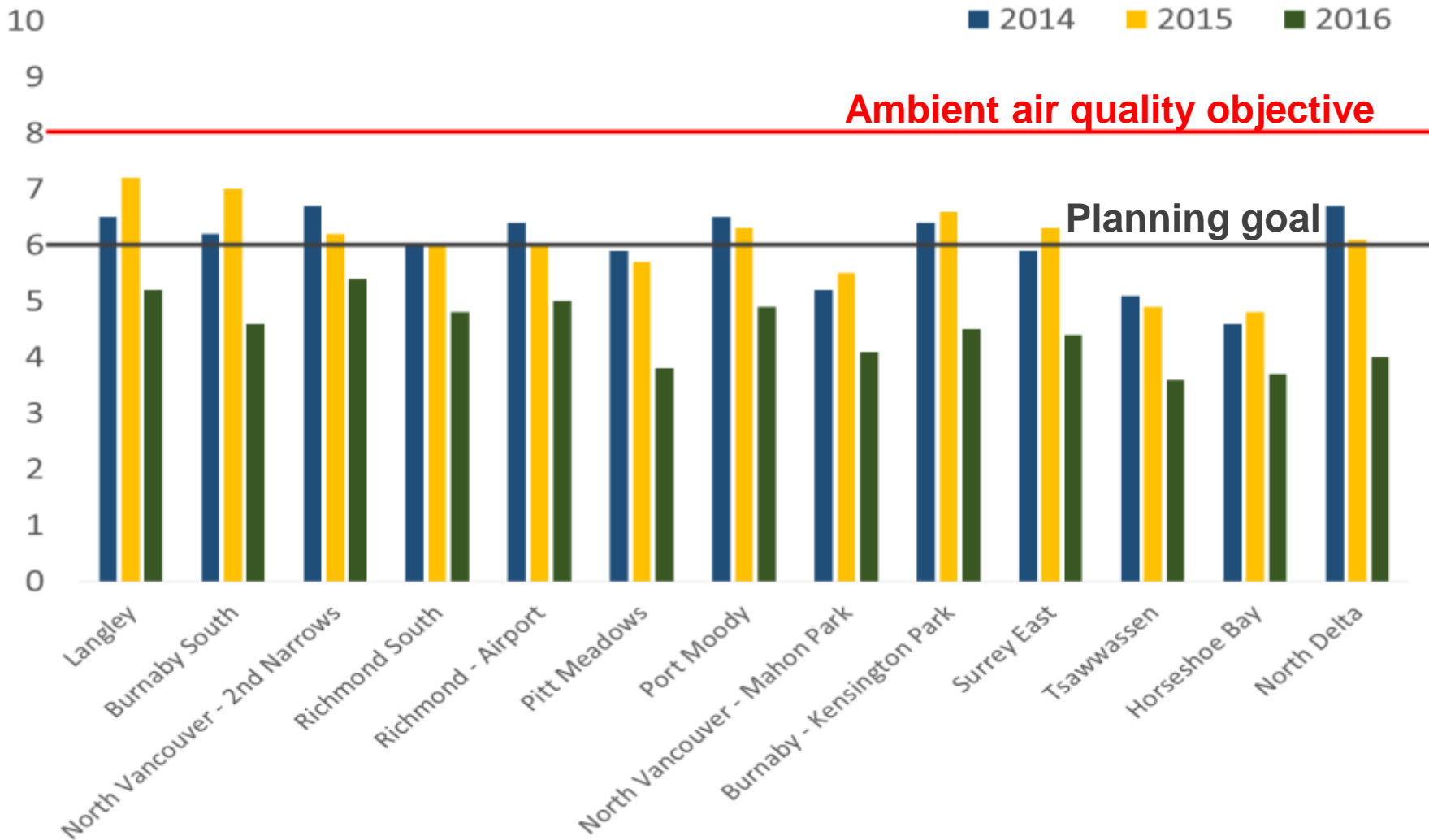


# Wood Smoke in Metro Vancouver

- Approximately 100,000 fireplaces and stoves are in use in the region
- Largest source of annual fine particulate emissions in region
  - Higher proportion in winter

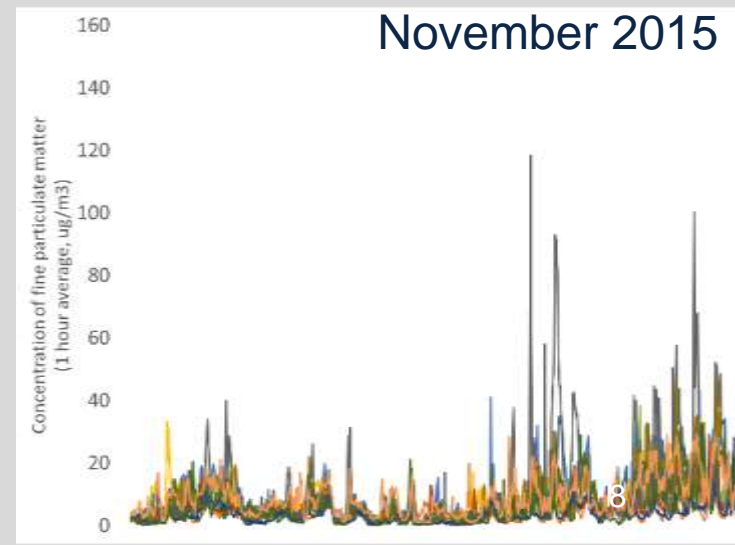
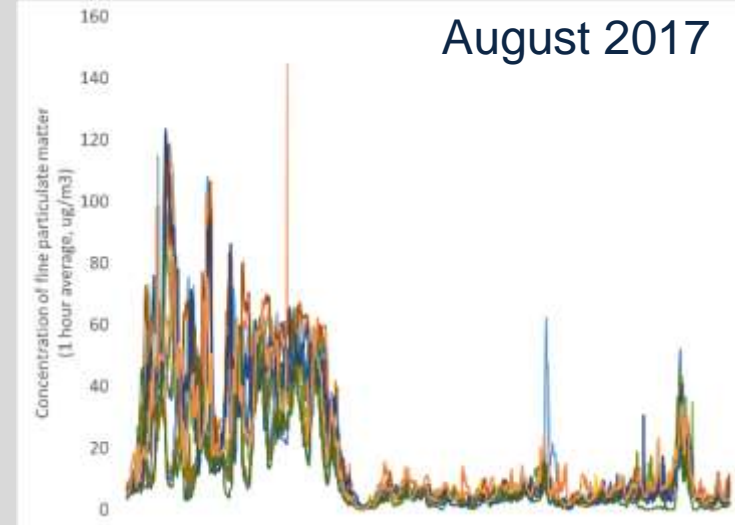
# Regional PM<sub>2.5</sub> Emissions Sources





# Wood Smoke in Metro Vancouver

- 5 to 25 complaints per month about wood smoke during the winter
- More than 60% of wood smoke complaints relate to residential wood burning





# Wood Smoke Complaints



# What we are doing

- Wood stove exchange program
- Wood heat workshops
- Educational video on social media
- Cool weather air quality bulletins
- Wood smoke forecasting tool
- Caring for the Air reports



BURNING ADVISORY LINE

**604-436-6777**



# Wood Stove Exchange Program

# Why exchange wood stoves?

- New, certified wood stoves, when operated properly, can reduce particulate emissions up to 80%
- Natural gas appliances can reduce particulate matter emissions by 99%.



# Why exchange wood stoves?

Rebates help accelerate turnover to more energy efficient, cleaner appliances

- Over 500 exchanges
- More than nine tonnes of PM<sub>2.5</sub> per year



# Program rebates

Taking an uncertified appliance out of use could qualify you for:

- \$400 if you exchange to a pellet stove, electric heat pump, or natural gas or propane appliance; or
- \$250 if you exchange to a certified wood-burning appliance or electric insert.

Rebates are limited and are issued to qualifying residents on a first come, first served basis.





# Education initiatives

# Targeted Education

- Wood heat workshops
- Complaint response
- Wood smoke dispersion forecast





# Broad Education

- Social media
  - Video
- Information brochures
  - Best practices
- Cool weather air quality bulletins
- 'Caring for the Air' report





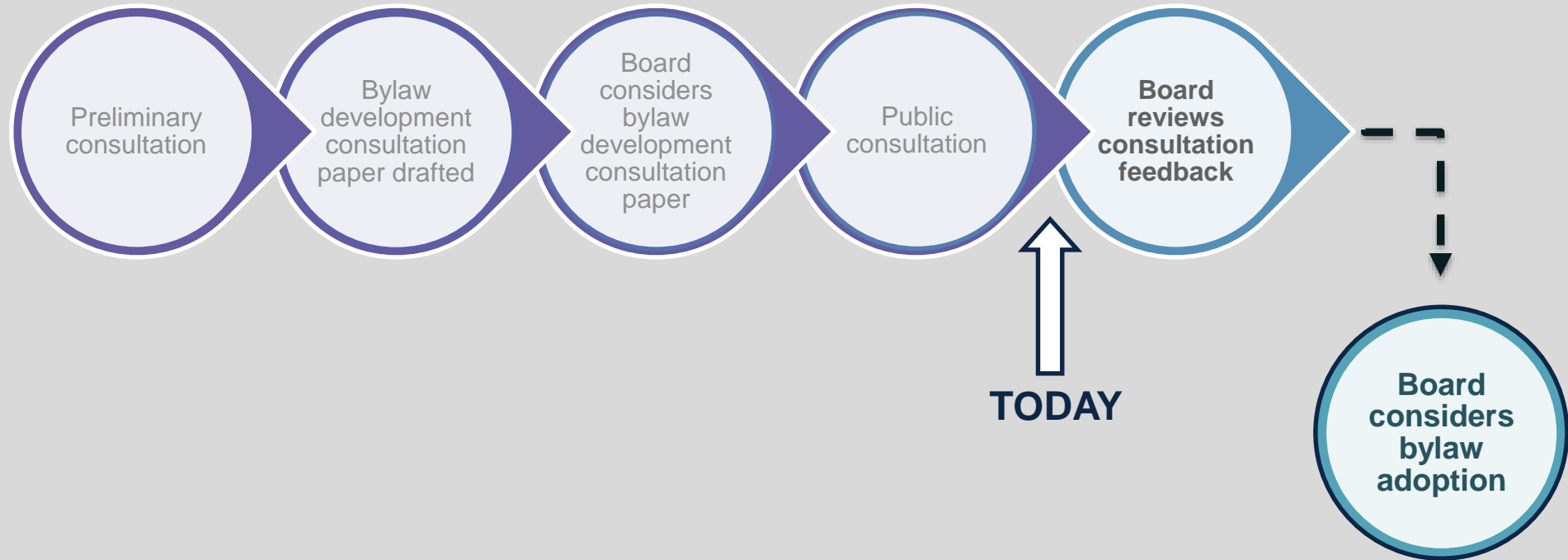
# A Phased Approach to Regulation

# Current Status in Metro Vancouver

- Air Quality Management Bylaw 1082:
  - Restricts fuels allowed to be used
  - Requires operation in a manner that minimizes emissions
  - Generally prohibits causing air pollution



# Developing a Residential Wood Burning Regulation



# Proposed Regulatory Elements

## 2020: Seasonal restrictions

- Prohibit emissions from indoor residential heating appliances between May 15 and September 15
- Emissions allowed from residential wood burning appliances used solely for cooking during seasonal restrictions



# Proposed Regulatory Elements

## 2022: Registration requirements

- Register appliances that emit no more than 4.5 grams particulate per hour
- Register masonry heaters

## Registration options

- At appliance point of purchase
- During installation, inspection or maintenance



# Proposed Regulatory Elements

2025: Prohibition on emissions from wood burning appliances, except

- Registered appliances
- Appliances that are the sole source of heat
- In case of hardship
- Outside the Urban Containment Boundary



# Urban Containment Boundary





Not a ban on all appliances



VERY DIRTY

VERY CLEAN

# Summary

- Wood smoke issues occur in urban environments such as Metro Vancouver
- Metro Vancouver is pursuing a multi-faceted approach to managing wood smoke emissions from indoor residential wood burning:
  - Wood stove exchange
  - Education and outreach
  - Regulation



Questions?



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