



# Metro Vancouver's *Clean Air Plan*

## IMPLICATIONS FOR MAPLEWOOD FLATS AND LOCAL INDUSTRY

John Lindner

Air Quality Planner

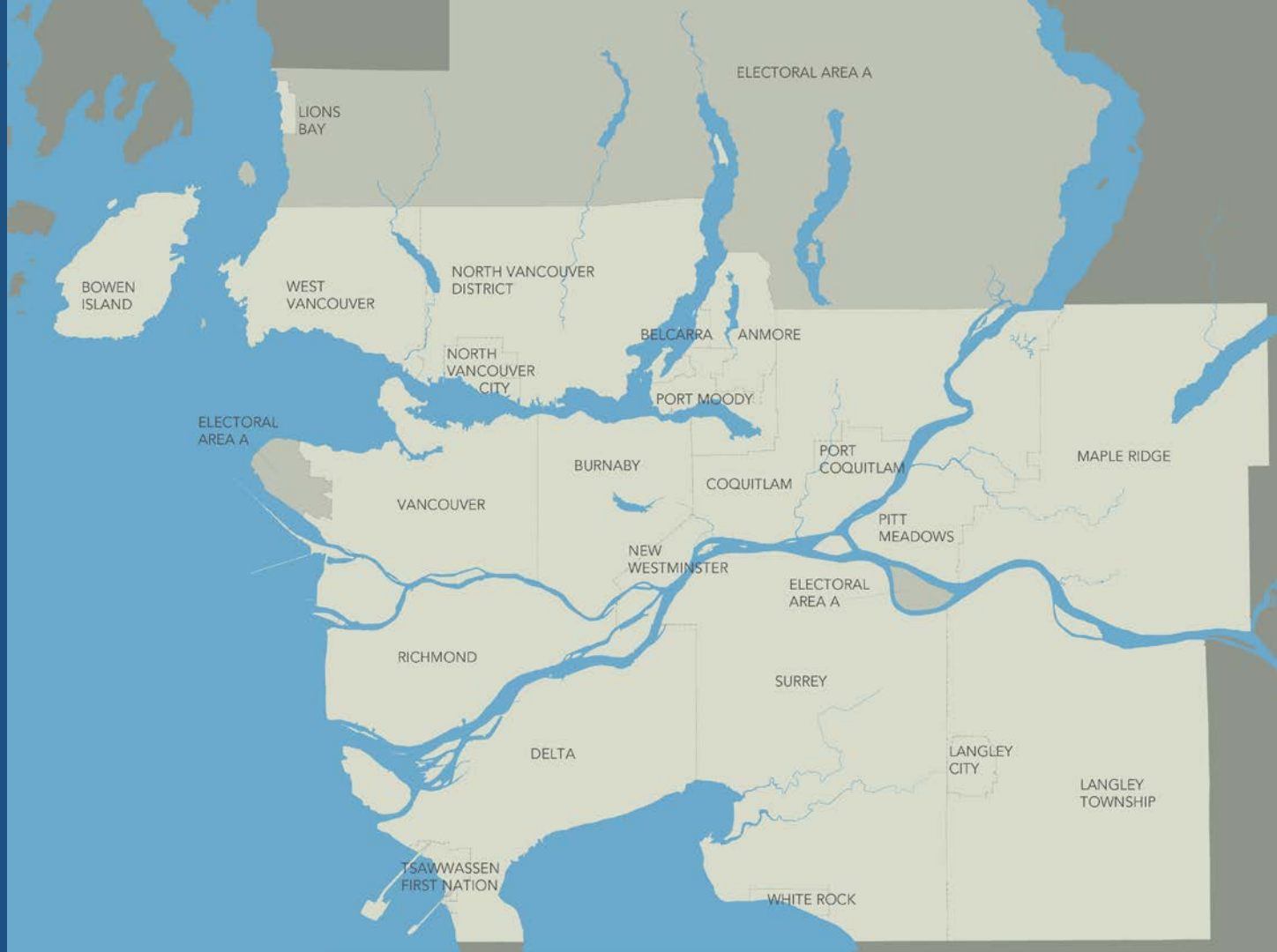
Derek Jennejohn

Lead Senior Engineer

Community Advisory Panel presentation, February 15, 2022

**metro**vancouver

# Metro Vancouver



# AIR QUALITY AND GREENHOUSE GAS MANAGEMENT

Metro Vancouver

- Metro Vancouver has **delegated authority to control air pollution and manage air quality**
- Convener on issues of regional significance
- Key elements of Metro Vancouver's management program:
  - Monitoring air quality and emissions
  - Issuing and promoting compliance with industrial permits
  - Developing plans, strategies and regulations
  - Delivering awareness and incentive programs

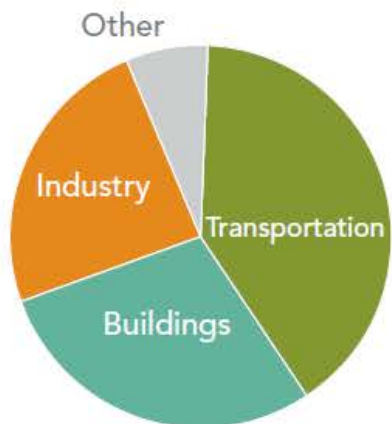
# REGIONAL AIR QUALITY

Fine particulate matter in 2020

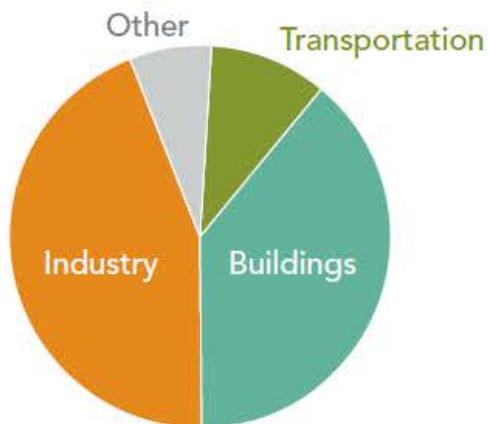


# REGIONAL EMISSIONS BY SOURCE AND CONTAMINANT

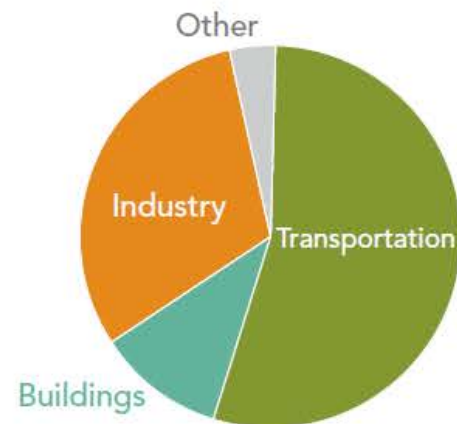
## GREENHOUSE GASES



## FINE PARTICULATE MATTER



## NITROGEN OXIDES



# MANAGING EMISSIONS FROM INDUSTRIAL FACILITIES

- >1000 industrial facilities and related commercial operations operate under **Metro Vancouver permits and regulations**
- **Permits are unique to individual facilities**
  - Permit decisions consider site location, nature and quantity of emissions, potential impacts on nearby receptors, etc.
- **Regulations include common requirements** for an entire industrial/commercial sector
  - Examples include autobody shops, concrete batch plants, boilers, non-road diesel engines

# CLEAN AIR PLAN

- Metro Vancouver's fourth air quality and greenhouse gas management plan, through to 2030
- **Includes actions for Metro Vancouver and other governments**



# 2019 TO 2021 ENGAGEMENT

## Clean Air Plan



Public forums and  
webinars  
**450 participants**

**240** participants in Stakeholder forums



**8000+** views  
Web resource  
visitors



**75+**  
detailed online  
feedback forms



**75+**  
meetings, workshops, forums,  
webinars, public dialogues,  
community events and presentations



Social Media reach  
**200K+** saw the information

Social interaction  
**6500+** clicked, shared,  
commented and liked



Project team emails  
**70+** composed written feedback  
(including formal letters)



Introductory video views  
**5000+** watched the video



# REGIONAL 2030 TARGETS

## *Clean Air Plan*

1. **Reduce regional GHGs by 45% from 2010 levels**
2. **Air quality in the region is continually improving**, protecting human health and the environment, by ensuring that:
  - a. Ambient air quality meets or is better than the ambient air quality objectives and standards that are regularly updated by Metro Vancouver, the BC Government and the Government of Canada; and
  - b. The amount of time that visual air quality is classified as "excellent" is increasing.

# BIG MOVES AND OTHER ACTIONS

## *Clean Air Plan*

- 29 Big Moves
  - 15 with leadership role for Metro Vancouver
- 98 Supporting Actions
  - 46 with leadership role for Metro Vancouver
- 9 Corporate Actions
- Actions include guidance, incentives, awareness and outreach programs, standards, research, policies, programs and regulations

# ISSUE AREAS

## *Clean Air Plan*

1. Transportation
2. Buildings
3. Industry
4. Agriculture
5. Health
6. Measure, Monitor and Regulate



# ISSUE AREAS

## *Clean Air Plan*

1. Transportation
  2. Buildings
  3. Industry
  4. Agriculture
  5. Health
  6. Measure, Monitor and Regulate
- Generates more than 90% of regional emissions**



# CLEAN AIR PLAN

Transportation actions on trucking and rail (1)

**1.3.4 Long-term Emissions Strategy for Medium and Heavy Trucks.** Work with the BC Government and partners to develop a long-term province-wide emissions strategy for medium and heavy duty vehicles

- Strategy should identify a phased timeline to implement a suite of policies and programs that would accelerate fleet turnover to cleaner vehicles while preparing for the longer term transition to zero emission vehicles
- Strategy should target both greenhouse gas emissions and health-harming air contaminants, while providing a level-playing field and minimizing stranded assets

# CLEAN AIR PLAN

## Transportation actions on trucking and rail (2)

**1.3.1 Regulate Existing Medium and Heavy Trucks.** Develop regulatory requirements to reduce emissions for existing medium and heavy duty vehicles, to be implemented by the BC Government or Metro Vancouver

- Approaches could include an inspection and maintenance program that requires repairs on higher emitting trucks, registration requirements targeting older trucks, a regional smoking vehicle hotline, and low or zero emission zones
- Requirements should be developed in coordination with local governments, the Port of Vancouver and other regional partners
- Requirements would initially target health-harming air contaminants but should eventually include greenhouse gas emissions

# CLEAN AIR PLAN

Transportation actions on trucking and rail (3)

**1.3.5 Make Low and Zero Emission Medium and Heavy Trucks More Affordable.** Advocate to the BC Government, the Government of Canada and other regional partners to enhance funding (e.g., incentives, loans, tax credits, joint financing) for the purchase of low and zero emission medium and heavy duty vehicles

- Any program should consider whether funds should be targeted to groups less able to afford low and zero emission medium and heavy duty vehicles

# CLEAN AIR PLAN

Transportation actions on trucking and rail (4)

## **1.3.7 Zero Carbon Refueling Strategy for Medium and Heavy Trucks.**

Develop a long-term regional zero carbon refueling strategy for medium and heavy duty vehicles, coordinating with local governments, energy utilities, the Port of Vancouver, TransLink, fuels industry and other regional partners

- Strategy would identify where refueling stations are needed for different fuels including electricity, hydrogen, renewable diesel, etc.
- Strategy could identify pilot projects
- Strategy should align with similar strategies for passenger vehicles and non-road equipment



# CLEAN AIR PLAN

Transportation actions on trucking and rail (5)

**1.3.9 Large Fleets to Adopt “ZEV-First” Procurement.** Develop and support implementation of “ZEV-first” fleet procurement policies to transition large fleets to zero emission vehicles by the late 2040s, coordinating with local governments and large fleet operators in the region.

- Policies would be supported by regularly updated information on the availability of zero emission medium and heavy duty vehicles
- Policies could also include guidance on right-sizing fleets, and calculating total lifetime costs of zero emission vehicles
- Policies could support regional coordination of purchases (i.e., bulk buy) of zero emission vehicles for fleets to help reduce costs

# CLEAN AIR PLAN

Transportation actions on trucking and rail (6)

**1.4.2 Accelerate Emission Reductions from Rail Locomotives.** Advocate to the Government of Canada and the BC Government to continue development and implementation of long-term strategies to accelerate emission reductions from rail locomotives in the region.

- Different strategies needed for local and long-haul locomotives
- Short term, strategies should prioritize cleaner locomotives, particularly those operating near neighbourhoods most impacted by rail emissions
- Long term, strategies should establish more stringent greenhouse gas emission targets, standards and regulations for long-haul, switch and local locomotives, to achieve a carbon neutral rail sector by 2050
- The strategies should also consider efficiency improvements, and the design and funding needs for refueling infrastructure for zero carbon locomotives

# CLEAN AIR PLAN

Industry actions on facilities and non-road (1)

**3.1.1 More Stringent Greenhouse Gas Requirements for Large Industrial Emitters.** Advocate to the BC Government to implement more stringent requirements for BC-based industrial facilities with significant greenhouse gas emissions

- Requirements could include increases to or expansion of the carbon tax, as well as mandatory carbon offsets
- Requirements would be supported by incentives

# CLEAN AIR PLAN

Industry actions on facilities and non-road (2)

## 3.1.2 Integrate Greenhouse Gases into Emission Regulations and Permits.

Develop and implement processes to integrate greenhouse gas reduction requirements into new emission regulations, amendments of existing emission regulations, new permits, and permit amendments

- Integration would consider greenhouse gas regulations implemented by the BC Government, as well as the benefits and trade-offs of reducing greenhouse gases versus improving regional air quality
- Integration could include greenhouse gas emission limits and fees, and could require permitted industrial facilities to evaluate opportunities to transition to clean, renewable energy, better utilize waste heat, or to phase out the use of some fossil fuels

# CLEAN AIR PLAN

Industry actions on facilities and non-road (3)

**3.1.4 Industrial Emission Reduction Incentives.** Advocate to the BC Government and the Government of Canada to enhance or develop incentives for industrial facilities to reduce emissions of greenhouse gases and other air contaminants

- Incentives could include rebates on carbon tax or energy efficiency upgrades, tax credits, and innovative financing mechanisms
- Incentives should be based on emission reductions that meet or exceed relevant industrial emission benchmarks

# CLEAN AIR PLAN

Industry actions on facilities and non-road (4)

**3.1.7 Carbon Tariffs.** Advocate to the Government of Canada and the BC Government to establish carbon tariffs or carbon border tax adjustments for imported industrial, manufactured and agricultural goods

- This will help industrial facilities and businesses in the region to compete fairly against imported goods with higher carbon content

# CLEAN AIR PLAN

Industry actions on facilities and non-road (5)

**3.1.8 Regional Industrial Emissions Working Group.** Work with the BC Government, local First Nations, regional industry, business associations, academic institutions, port terminals and other partners to explore the opportunities for establishing a regional industrial emissions working group

- Working group would collectively identify the best opportunities to both minimize air quality impacts from industrial facilities and reduce industrial greenhouse gas emissions
- Working group could help accelerate emission control innovation at industrial facilities, including supporting pilot projects

# CLEAN AIR PLAN

Industry actions on facilities and non-road (10)

**3.4.1 Carbon Capture in Metro Vancouver Region.** Work with industry, academia and other regional partners to explore the potential opportunities for carbon capture technologies in the region, including pilot projects and uses of captured carbon dioxide



# CLEAN AIR PLAN

Industry actions on facilities and non-road (6)

**3.2.3 Funding for Cleaner Non-Road Equipment.** Advocate to the BC Government and the Government of Canada to enhance funding (e.g., incentives, loans, tax credits) to replace or retrofit existing non-road equipment, to reduce emissions of health-harming air contaminants and greenhouse gases

- Higher incentives should be available for zero emission equipment and if old equipment is scrapped

# CLEAN AIR PLAN

Industry actions on facilities and non-road (7)

## **3.2.4 Identify Infrastructure Needs for Zero Emission Non-Road Equipment.**

Work with energy utilities, local governments, Port of Vancouver, industry and other regional partners to identify the regional infrastructure needs to support a long-term transition to zero emission non-road equipment

- This would consider the refueling and charging needs for different types of non-road equipment, funding requirements, potential pilot projects
- Should align with similar actions for passenger vehicles and medium and heavy duty vehicles

# CLEAN AIR PLAN

Industry actions on facilities and non-road (8)

**3.2.6 Awareness Program on Zero Emission Non-Road Equipment.** Develop and implement an awareness and outreach program for residents and businesses about the benefits of zero emission non-road equipment, working with local governments and other regional partners.

- Program would include regularly updated information on the availability of zero emission equipment and guidance on right-sizing non-road fleets, as well as supporting regional coordination of purchases (i.e., bulk buy) to help reduce costs

# INTEGRATING EQUITY

## *Clean Air Plan*

- Long-term approach
- Community input process
- Air quality equity tool
- Metrics and targets



# ONGOING REGIONAL ACTIONS

- Explore regulatory policies for existing passenger and commercial vehicles
- Collaborate with BC Government on Clean Transportation Action Plan
- Outreach on requirements for residential wood burning appliances
- Conduct engagement on GHG standards for existing large buildings
- Explore how to integrate greenhouse gases into regulations and permits
- Continue engagement on regulations for open-air burning, odour, and cannabis industry

# FINAL CONSIDERATIONS

*Clean Air Plan* and Metro Vancouver management program

- Regional authority supports local and targeted responses
  - Can be more nimble than senior governments
- **Ongoing collaboration and engagement is critical**
- Key challenges:
  - Costs to residents and businesses
  - Technology availability
  - Equity of actions
  - Balancing air quality and greenhouse gas reductions



New Brighton Park

Questions?

**metrovancouver**  
Together we make our region strong