

A scenic photograph of a sunset over a mountain range. The sun is low on the horizon, creating a bright starburst effect with rays of light. The sky is a clear, pale blue. In the foreground, the dark silhouettes of evergreen trees are visible against the lighter background. The overall mood is peaceful and natural.

Cowichan Regional Airshed Protection Strategy Roundtable

February 29, 2024



'Uy' skweyul 'Uy kwun-us 'l' lumnamu





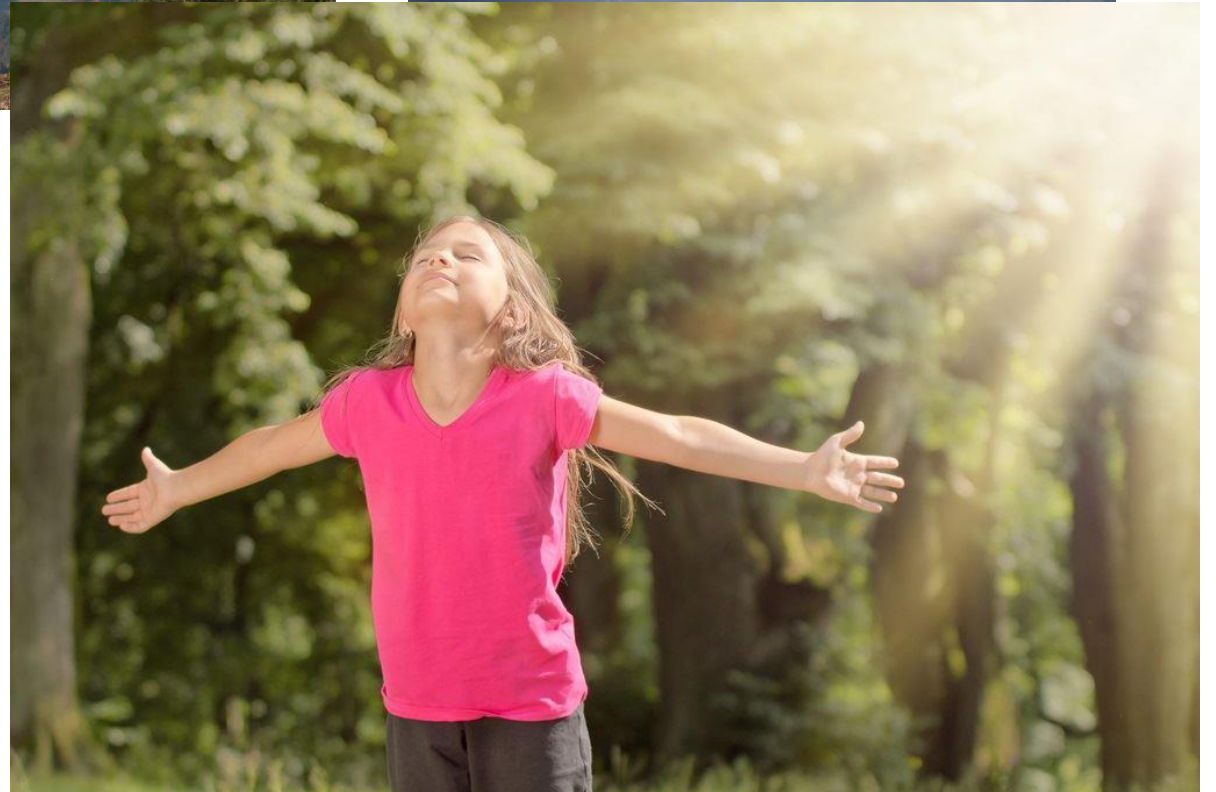
- ***Reaffirm trust.***
- ***Be transparent***
- ***Fail forward***
- ***Create vitality, have fun, become the place to be.***



Time for a Round
Table Check in

2-3 minutes what you
have been doing

Cowichan Airshed Strategy Update Keith Lawrence



A multi-phased program to take airshed protection action



2014, Emissions Inventory to understand key sources. **Approved**
Built upon the 2012 community GHG emissions inventory

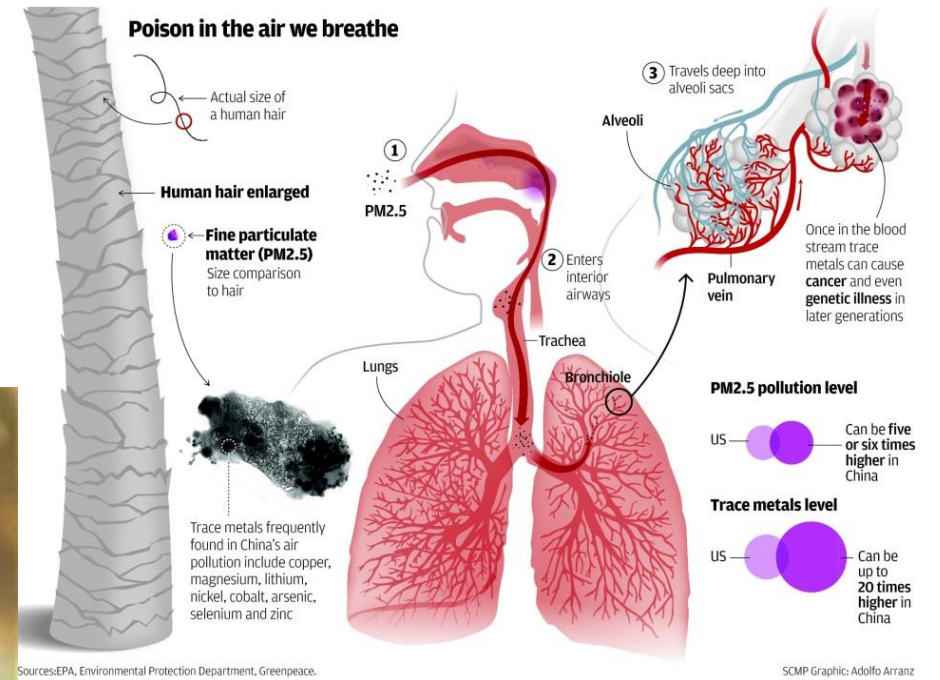
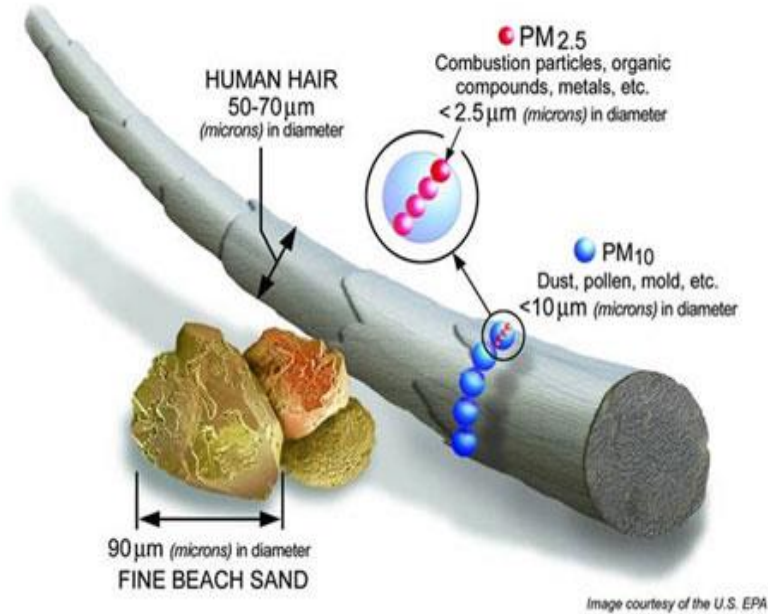
2015 Air Quality Study to understand air contaminant levels relative to air quality objectives **Approved**

2016, Cowichan Region Airshed Protection Strategy **Approved**

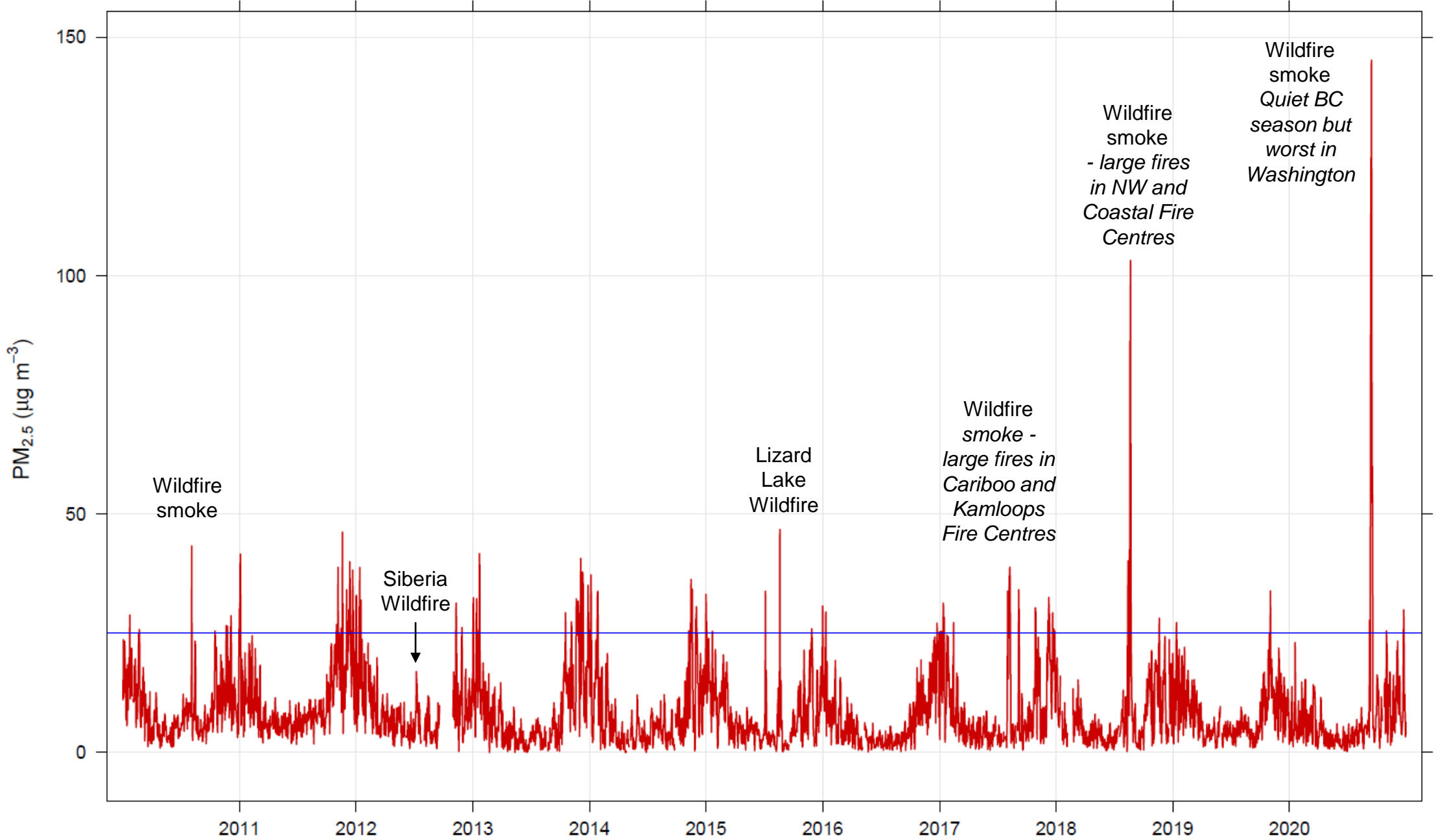
2018, Airshed Protection Roundtable to support implementation of the Strategy. **Approved**

2023, Strategy update as directed by the corporate strategic plan. **Approved**

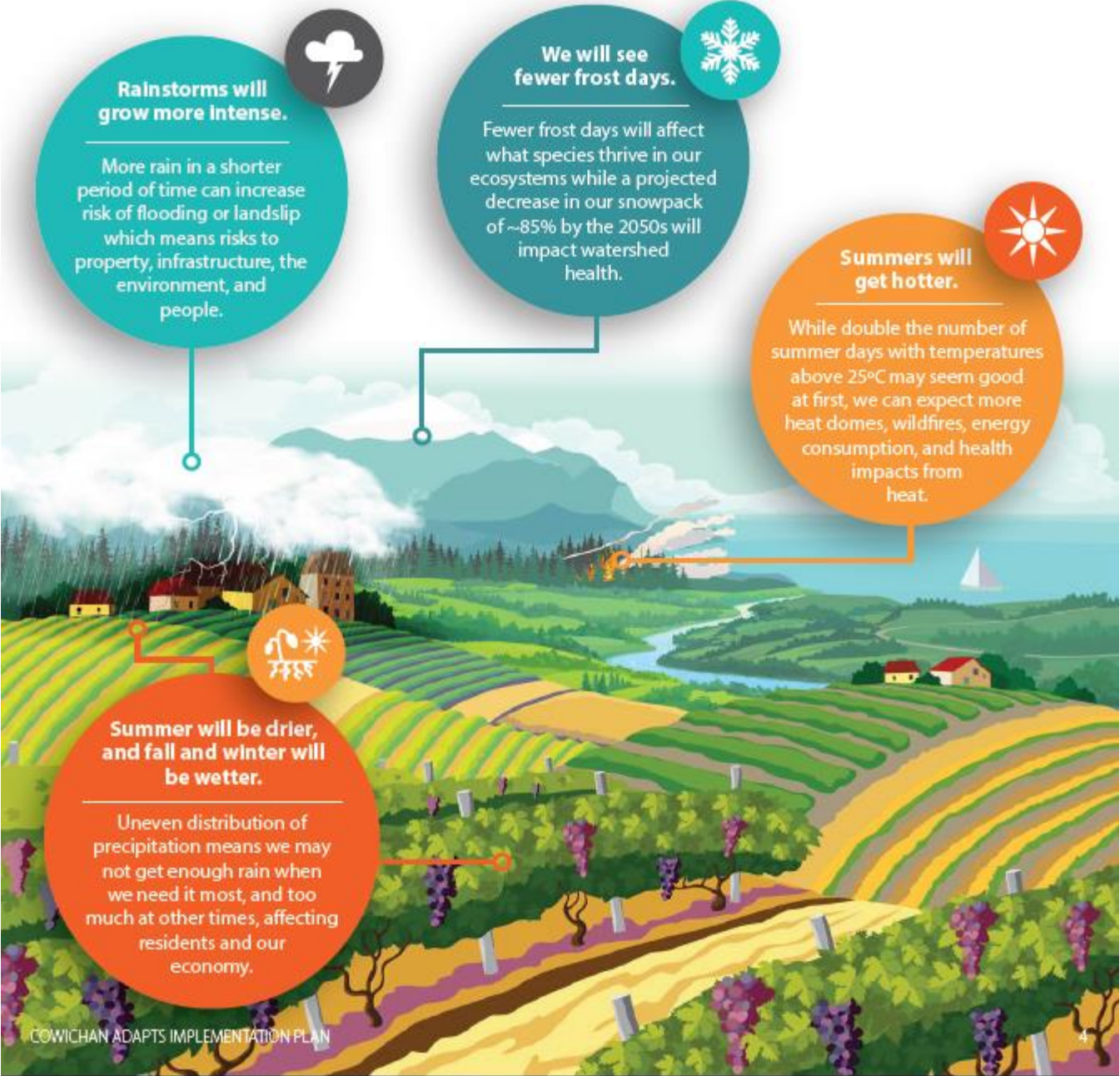
What is the air quality problem in the Cowichan?



What is the air quality problem in the Cowichan?



What do the climate projections tell us?





Working together for clean air to support our health, our environment and our communities

Goals

1. Protecting Human Health
→ Reducing PM_{2.5} from open burning and wood burning appliances
2. Building Strong and Collaborative Partnerships

Partnership



Some highlights of prior actions

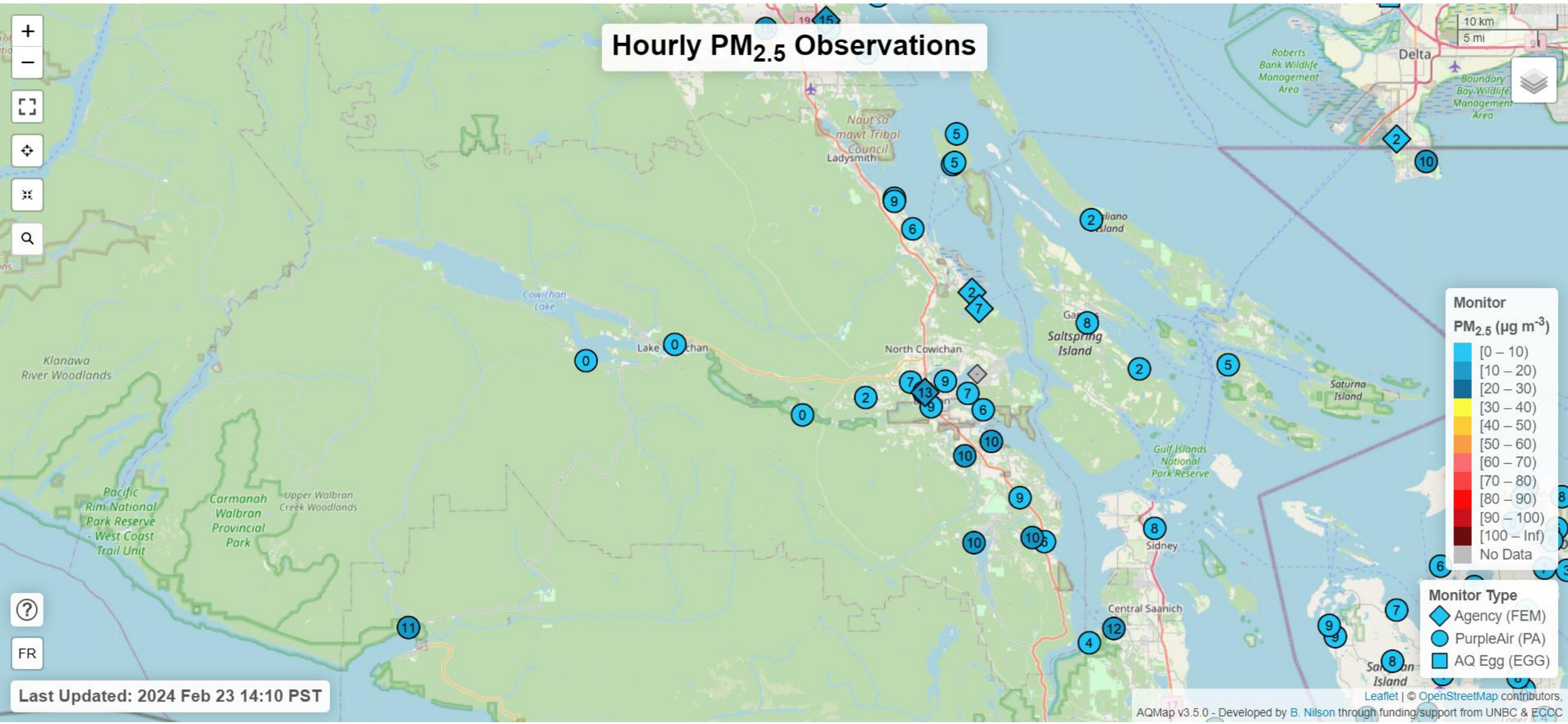
- Including **Saltair** in the Backyard Burning Bylaw
- Developing a **Burning Bylaw Matrix**
- Open Burning Emissions Reduction Study – *In progress*

- Refocusing the **Woodstove Exchange Program** on alternative heat sources

- Establishing the **Neighbourhood PM_{2.5} Sensor Network**



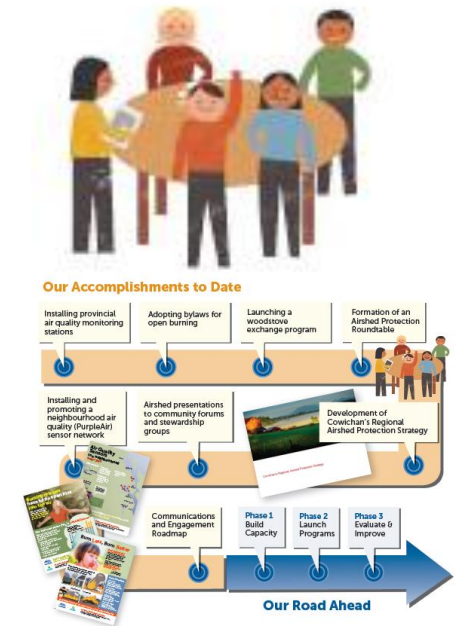
Hourly PM_{2.5} Observations



Last Updated: 2024 Feb 23 14:10 PST

Some highlights of prior actions

- The CVRD and partners have been voted **Clean Air Champion** for 2017 by the BC Lung Association
- Funding granted by the MOE for coordination of the Roundtable, education and outreach
- Developing a **Communications & Engagement Roadmap**
→ funding provided by PlanH (BC Healthy Communities)



Airshed Communications & Engagement Roadmap

Our Accomplishments to Date





Burning releases harmful fine particles (PM_{2.5}) into the air

Can you improve the air
in your neighbourhood?

**Yes! By improving how we
burn, we can improve our
air at the local level.**

PM_{2.5} can travel
deep into the lungs
causing disease
and contributing
to earlier death



Be air aware. Check your local air quality at www.cvrld.bc.ca/air



Burn **Less**, Burn **Better**



BURN LESS

Recycling yard waste at CVRD dropoff locations. Start a backyard compost.

BURN CLEAN

If you need to burn, burn only dry branches and sticks. Never burn garbage.

CHECK THE VENTING INDEX

Choose a day when smoke disperses quickly.

Air Quality Sensors

in a neighbourhood near you



NOW YOU CAN

- Check your local air quality online with the PurpleAir Map
- Understand patterns of fine particles (PM_{2.5}) in our air
- Fine air quality hotspots in the region

Cowichan Air Quality Partnership

A collaborative project led by local and provincial government, First Nations, and local air stewards

Goal 1 – Protecting Human Health

Updated Actions

- Raise public awareness for impacts and best practices
- Establish clean air shelters
- Develop consistent regulatory approaches for open burning
- Explore options for a curbside pickup of yard materials
- Develop consistent regulatory approach for woodstoves
- Enhance incentive programs for replacement of woodstoves to other primary modes of heating



Goal 2 – Building Strong and Collaborative Partnerships

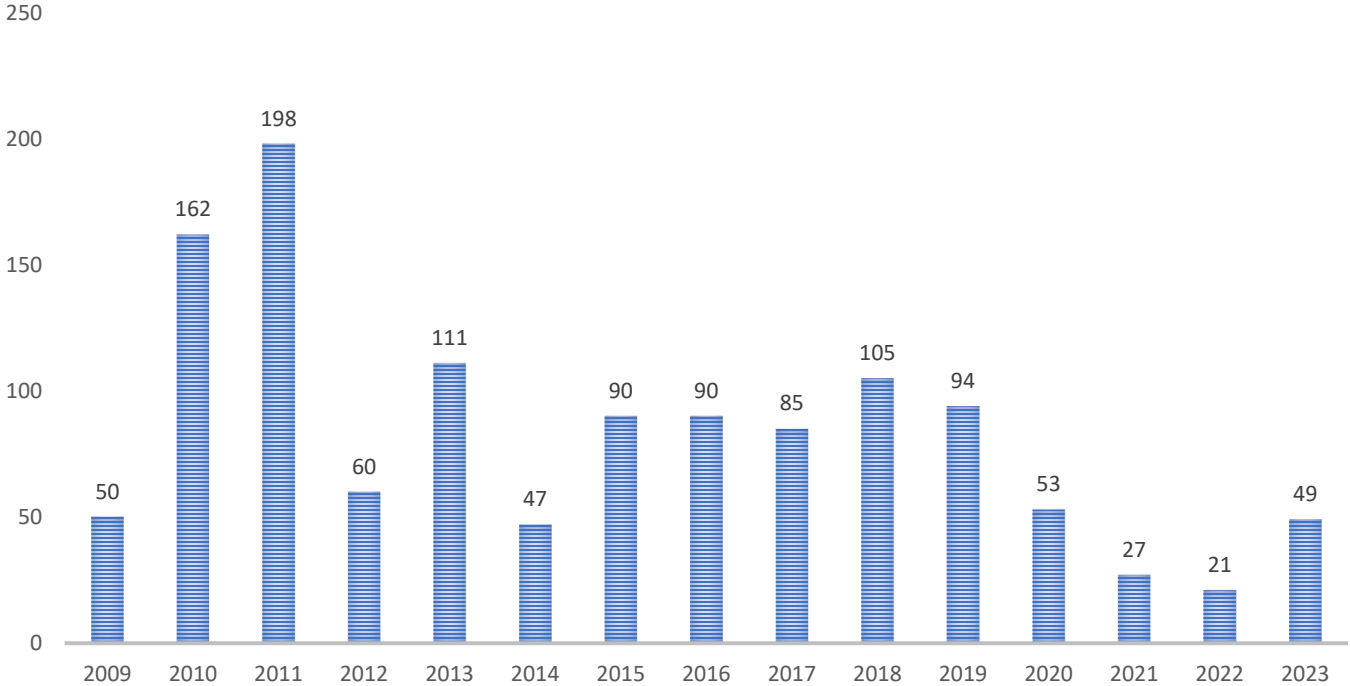
Updated Actions

- Collaboration through the Airshed Protection Roundtable
- Develop Work Plans
- Periodic Reporting and Monitoring
- Develop linkages to climate change, transportation, wildfire and solid waste planning



Rebates – Wood Smoke Reduction Program

REBATES ISSUED



Total rebates to date: 1,242

2009-2017: all wood-to-wood

2017: wood-to-wood, gas, pellet or heat pump

2018/2019: wood-to-gas increase – climate concern. Rebate \$ used up before year end

2020: most wood-to-heat pumps in one year (14); discontinued gas rebate

2021-2022: decrease in interest – COVID?

2023: amount of rebates more than doubled from 2022 (16 of those being issued in November)

2024 Rebate Amounts

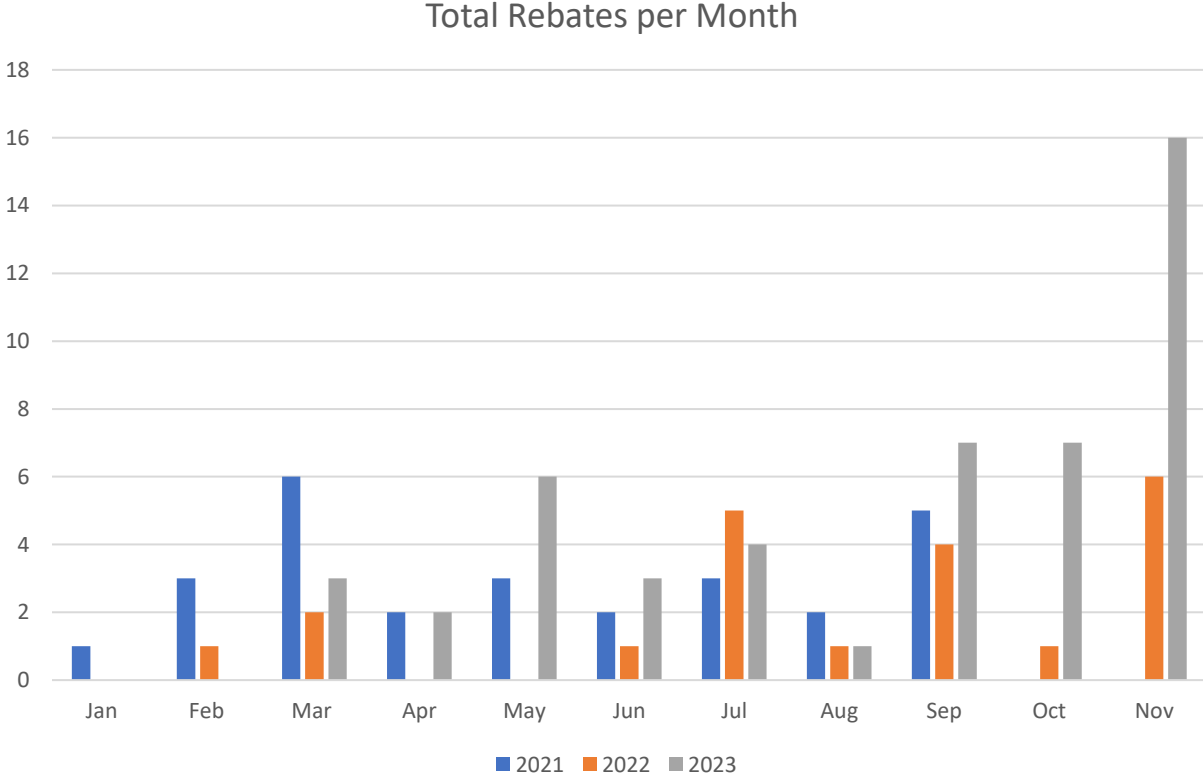
Residents can keep woodstove for emergency use

Smoke Reduction Incentives	2022	2023 & 2024	ENV Portion	CVRD	Retailer
Wood to 2020-EPA certified stove	\$350	\$550	\$500	\$0	\$50
Wood to Pellet Stove	\$800	\$1,050	\$1,000	\$0	\$50
Wood to Heat Pump	\$2,000	\$2,350	\$1,550	\$650	\$150
Bounty Program Turn in an non-EPA stove for a reward!	NA	\$300	\$300	-	-

Bounty Program!



Rebate Interest Over the Year





THANK YOU

Break



Air Quality Summary

Ministry of Environment and Climate Change Strategy-

Nick Davies



Community Health Update

Angela Eykelbosh- Environmental Public Health



Donna Jouan-Tapp Island Health



Communications and Community Education



Postcards

Burning releases harmful fine particles into the air

Can you improve the air
in your neighbourhood?
Yes! By improving how we
burn, we can improve our
air at the local level.

Be air aware. Check your local air quality at www.cvrld.bc.ca/air

Fine Particulate Matter (PM_{2.5}) is a Health Concern

These particles are smaller than 2.5 microns—20 times smaller than the width of a human hair. Fine particles can:

- travel deep into the lungs causing disease and contributing to earlier death
- make it harder for people to breathe
- make existing lung or heart related symptoms worse
- trigger heart attacks

Month-by-Month Concentrations of PM_{2.5} in the Cowichan
(Average Daily Maximum Level)



Where Does It Come From?

23%
Home Heating
with Wood

53%
Open Burning



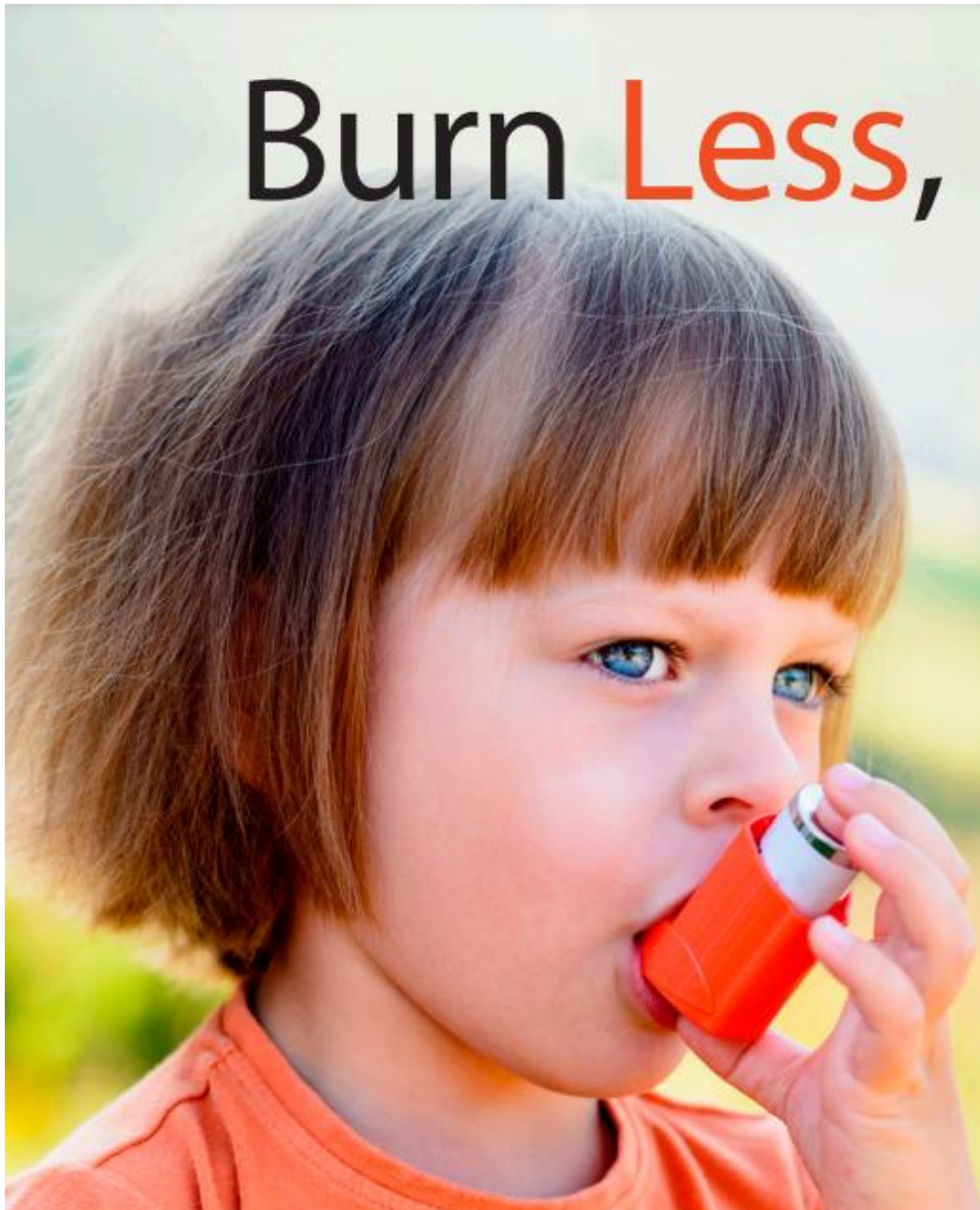
Let's work together!

Cowichan Air
Quality Partnership



A collaborative project led by local and provincial government, First Nations and local air quality stewards

Burn **Less**, Burn **Better**



“There is something about the smell of wood smoke and the warmth of heat from a fire that is comforting for people. In our region, it is part of our history of living off the land.

But today, we know about the health effects of wood smoke. And today, the technology and practices exist to do it better.”

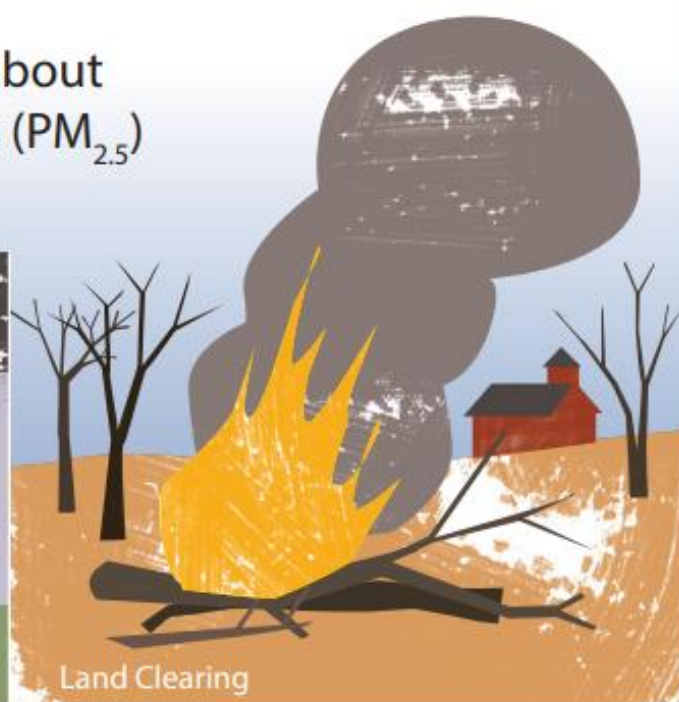
— TW PATERSON,
LOCAL HISTORIAN

Be air aware. Check your local air quality at www.cvrld.bc.ca/air

OPEN BURNING accounts for about half of the harmful fine particles (PM_{2.5}) being released in our region.



Residential Backyard Burning



Land Clearing



Agricultural Burning



Forestry Burning

How to Burn Better

BURN LESS

Recycle yard waste at CVRD dropoff locations. Start a backyard compost.

BURN CLEAN

If you need to burn, burn only dry branches and sticks. Never burn garbage.

CHECK THE VENTING INDEX

Choose a day when smoke disperses quickly.

KNOW THE RULES

Local or provincial regulations may apply—sometimes more than one!



Cowichan Air Quality Partnership

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Air Quality Sensors in a neighbourhood near you

NOW YOU CAN

- Check your local air quality online with the PurpleAir Map
- Understand patterns of fine particles (PM_{2.5}) in our air
- Find air quality hotspots in the region

Make sure to check PM_{2.5} levels each day. So you can enjoy your activities safely!



What happens nearby affects your health the most.



Learn more at www.cvrd.bc.ca/air



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Facebook Video- What is the Venting Index?

- <https://www.facebook.com/mycvrd/videos/backyard-burning-and-venting-index/187009066052759/>

Healthier Home Heating Video

- 476 views
- <https://www.youtube.com/watch?v=sOxtX9g6hZc&list=PL0osiz6D4yhgVNWEdk9oxTCQ87g7i5jPH&index=11>

WILDFIRE

SMOKE & YOUR HEALTH



*Check air quality monitors at: fire.airnow.gov

Wildfire smoke contains a mix of harmful gases & fine particles. Symptoms are shortness of breath, headache, nausea, eye, nose, & throat irritation. Children, the elderly, & those with heart/lung disease are most susceptible.



LIMIT TIME
OUTDOORS



DRINK
WATER



WEAR AN
N95 MASK



USE A HEPA
AIR FILTER



TALK TO
YOUR DR.



CHECK AIR
MONITORS*



CLOSE
WINDOWS

WILDFIRE SMOKE 101

How to prepare for wildfire smoke

Smoke from wildfires in forests and grasslands can be a major source of air pollution for Canadians. Communities across Canada experience wildfire smoke events, typically from April to October. Smoke may be carried hundreds or thousands of kilometres from the fire zone.

It is difficult to predict:



when fires will occur



how big they will be



how much smoke they will generate

If you live in an area at higher risk for wildfires, it's best to be prepared. You can develop plans and take actions to protect yourself and your family before wildfire season starts.



Checklist for wildfire smoke season preparedness

- Are you or is someone in your family at risk for wildfire smoke health effects?
- Do you have an adequate supply of medications?
- Do you have an adequate supply of food and water?
- Do you have spare filters for the air filtration unit (a high efficiency heat ventilation air conditioning (HVAC) system or an air purifier) in your home?
- Do you know where you can go to take a break from the smoke?
- Do you know where to find information about local air quality conditions?
- Do you know the emergency number for your local health authority?

WILDFIRE SMOKE 101

Wildfire smoke and your health

In Canada, wildfires can significantly increase air pollution levels. Wildfire smoke is a complex mixture of gases, particles, and water vapour that contains:

- ozone
- sulphur dioxide
- nitrogen dioxide
- carbon monoxide
- volatile organic compounds
- fine particulate matter (PM_{2.5})

These pollutants can harm your health, with PM_{2.5} posing the greatest risk.

There is no evidence of a safe level of exposure for most of these pollutants. This means that smoke can impact your health even at very low levels. As smoke levels increase, your health risks increase. Air quality may be decreased even if you can't see or smell smoke.

Symptoms



Milder and more common symptoms of smoke exposure include:

- headaches
- a mild cough
- a runny nose
- production of phlegm
- eye, nose and throat irritation

These symptoms can typically be managed without medical intervention.



More serious symptoms include:

- dizziness
- chest pains
- severe cough
- shortness of breath
- wheezing (including asthma attacks)
- heart palpitations (irregular heart beat)

If you have any of these symptoms, talk to a health care provider or seek urgent medical attention. Less commonly, exposure to wildfire smoke can lead to heart attack, stroke and even premature death. If you think you are having a medical emergency, dial 911 and seek immediate medical assistance.

Some people are at a higher risk of health problems when exposed to wildfire smoke including:

- seniors
- pregnant people
- infants and young children
- people who work outdoors
- people involved in strenuous outdoor exercise
- people with an existing illness or chronic health conditions, such as:
 - cancer
 - diabetes
 - mental illness
 - lung or heart conditions

A black bear is standing in a shallow stream, its legs and feet visible in the water. The bear's fur is dark and appears wet. The water is clear, showing rocks and some greenery on the banks. The text is overlaid on the bear's body.

The End
To Be Continued.....
See You Next Time