

Contact your local municipality for more information on the bylaws related to burning wood in and around your home.

# Wood Burning

# Smoke

## Wood Smoke - Introduction

- From burning wood under various conditions (e.g. stoves, fireplaces, and fire pits).
- Smoke composition can vary depending on what makes up part of the wood (e.g., mold, glue, and moisture).
- Smoke typically contains a mixture of gases and particles, including:
  - carbon monoxide,
  - volatile organic compounds,
  - sulphur oxides,
  - nitrogen oxides,
  - polycyclic aromatic hydrocarbons, and
  - fine particulate matter.

## Human Exposure to Wood Smoke

- By opening a wood burning stove while wood is burning inside.
- Through leaks and cracks in poorly maintained stoves or fireplaces.
- Through fresh air intake and/or opened windows and doors from nearby wood-burning sources.
- Being in close proximity to fire pits or forest fires.

## Health Concerns from Exposure to Smoke

- People with heart or lung diseases, children and seniors are the most vulnerable.
- Exposure is linked to exacerbation of pre-existing heart and lung diseases.
- However, even healthy people may experience temporary symptoms (e.g. trouble breathing, irritated eyes, and coughing).

## Regulation and Monitoring

- Regulating residential wood burning is the responsibility of local municipal governments. Some municipalities have bylaws or restrictions on burning wood and other materials.
- For installation and maintenance of in-home wood stoves, refer to the Alberta Building Code administered by Alberta Municipal Affairs.
- Outdoor air quality is monitored by Alberta Environment and Sustainable Resource Development and airsheds in over 20 communities across Alberta.
- Alberta has Ambient Air Quality Objectives (AAQOs) and guidelines for fine particulate matter, and they are rarely exceeded. When exceeded, the major causes are either forest fire smoke or emissions from automobiles and industry during stagnant weather conditions.

## Forecasting and Reporting Air Quality in Alberta

- The Air Quality Health Index (AQHI) helps Albertans understand what the air quality in their communities means to their health. The AQHI uses measured fine particulate matter levels in its reporting and forecasting. To learn more, visit <http://airquality.alberta.ca>.
- Air Quality Advisories are issued when smoke from forest fires may affect communities.
- Wood smoke from forest fires is forecasted by BlueSky, a smoke modeling framework used during fire season. For more information, visit: [www.bcairquality.ca/bluesky/west/index.html](http://www.bcairquality.ca/bluesky/west/index.html).

## Protect your Health

- Install smoke and carbon monoxide detectors
- Avoid wood burning as a heating source
- Choose a low-emission stove
- Maintain your wood stove or fireplace
  - Burn wisely - use dry, seasoned, and small pieces of wood
- Check the Air Quality Health Index for your community: <http://airquality.alberta.ca>

To avoid inhaling smoke and ash that can contain toxic chemicals, never burn:

- Painted or chemically treated wood
- Household garbage or cardboard
- Wet, rotted, diseased, or moldy wood