

What is Particulate Matter?

Particulate Matter (PM) includes minute solid or liquid particles that are suspended in the air, e.g. dust, dirt, soot and smoke. PM can be breathed deep into the lungs, aggravating heart and lung disease. Two types of PM are defined by size, PM₁₀ and PM_{2.5}. PM_{2.5} consists of particles 2.5 micrometers (µm) in diameter or less and PM₁₀ consists of particles 10 micrometers or less. The fraction of PM_{2.5} contained within PM₁₀ is referred to as the *fine fraction* while the remaining particles greater in size than 2.5µm but smaller than 10µm are referred to as the *coarse fraction*. PM_{2.5} is generally referred to as *fine particles*.

Contact Information

Ministry of Environment Omineca-Peace Region

Prince George Office: (250)565-6135
#325 – 1011 4th Ave. Prince George, B.C. V2L 3H9

Fort St. John Office: (250)787-3411
#400 – 10003 110th Ave. Fort St. John, B.C. V1J 6M7

Contact us to:

- Obtain copies of the Environmental Management Act (EMA) and the Open Burning Smoke Control Regulation (OBSCR);
- Report air quality issues and complaints;
- Assist with regulation interpretation;
- Initiate EMA permit applications.

Report Violations To

- Ministry of Environment Conservation Officer
Service 24-Hour Hotline 1-877-952-7277

GUIDE TO THE OPEN BURNING SMOKE CONTROL REGULATION (OBSCR)



What You Need to Know Before You Burn



Why Regulate Open Burning and Smoke?

It is evident from ongoing research that both short and long term exposure to air pollution can cause adverse health effects. Particulate Matter (PM) is one of the main constituents of smoke. PM can remain suspended in the air for days, and may be inhaled and deposited deep in the respiratory system.

Both PM₁₀ and PM_{2.5} have been associated with a range of adverse health effects including hospitalization for lung and heart problems, increases in emergency room visits for lung problems, increases in days of restricted activity in adults and school absenteeism in children, increases in respiratory symptoms, and reduced lung function. Increases in particle concentrations are also associated with an increased risk of premature death.

A review of medical studies has shown that there is no apparent threshold for adverse health effects related to PM₁₀ or PM_{2.5}. This has prompted governments to review and strengthen air quality criteria for PM in order to reduce its risk to Canadians. Open burning for the purpose of forestry resource management, and the disposal of land-cleared debris for industrial, agricultural and residential activities create smoke, and thus PM. This can affect air quality at both a localized neighbourhood scale and an entire airshed.

Before You Burn

- Ensure you comply with Ministry of Environment and Ministry of Forests and Range Open Burning Requirements.
- Call the Provincial Venting and Air Quality Information Line at **1-888-281-2992** to ensure open burning restrictions are not in effect and to ensure that weather is good for smoke dispersion. Press '7' for Omineca-Peace Region

Open Burning Requirements

The B.C. government proclaimed the Open Burning Smoke Control Regulation in 1993. It applies to fires for purposes such as land clearing, silviculture, forestry, wildlife habitat enhancement, and domestic range improvement. The intent of the regulation is to reduce smoke emissions and impacts from these sources without requiring an air emission permit from the B.C. Ministry of Environment. An air emission permit is *not required* for open burning of debris on a parcel of land, provided *all* of the following conditions are met:

- ✓ you have a burn reference number from the Ministry of Forests and Range
- ✓ there are no open burning restrictions in effect (see Burning Restrictions section);
- ✓ favourable weather exists for smoke dispersion (see Required Atmospheric Conditions section);
- ✓ prohibited and/or noxious materials are not burned (see Prohibited Materials section);
- ✓ debris is burned on land it originated from;
- ✓ open burning is conducted greater than 100 metres from neighbouring residences and businesses and greater than 500 metres from schools, hospitals, and continuing care facilities;
- ✓ smoke emissions will not pose a visibility hazard to airports or highways;
- ✓ the burn complies with any applicable municipal, regional district, or improvement district bylaw that is more restrictive than the regulation;
- ✓ open burning is conducted in accordance with the *Wildfire Act* and Regulation;
- ✓ for cities, towns, and villages:
 - the smoke release period must not exceed 72 consecutive hours
 - no open burning has occurred on the parcel of land at any time during the preceding 15 days
 - smoke may be released during open burning on a parcel of land no more than 4 separate occasions during a calendar year
- ✓ for areas other than cities, towns, and villages the smoke release period must not exceed 96 consecutive hours

Required Atmospheric Conditions

Burning when atmospheric conditions are favourable for dispersion prevents smoke impacts on the surrounding area. Atmospheric stability, mixing height and winds all affect how smoke is dispersed. The *ventilation index* (VI) measures the ability of the atmosphere to disperse smoke emissions. Environment Canada forecasts *ventilation indices* as part of their Prince George, McBride, Fort Nelson and Fort St. John Smoke Control Forecasts. Refer to the Omineca-Peace Region Ventilation Indices section (below) to determine which forecast applies to your area.

Open burning of debris must not be initiated or new material added if atmospheric mixing is insufficient to provide rapid dispersion of smoke emissions or if the air flow will cause the smoke to negatively impact on a nearby population or cause pollution. Please note that ventilation indices normally drop to Poor after sunset.

Unless otherwise specified in a locally developed Forest District Smoke Management Plan (contact your local Ministry of Forests and Range District office), The VI **must** be forecast as:

- **Good** (afternoon) for the day any open burn is started and
- **Good or Fair** (afternoon) for the second day of smoke release.

If the VI is not available for your area, you must conduct an on-site test burn of a small amount of debris on the day of the proposed burn, lasting no longer than 60 minutes, to evaluate if weather conditions promote good dispersion.

Debris must not be added to an existing burn if:

- weather conditions change and the ventilation index becomes **Poor** (ie. you must re-assess ventilation conditions before adding any additional material after the initial day of ignition);
- local winds make smoke dispersion inadequate;
- restrictions have been imposed by the Ministry of Environment, Ministry of Forests and Range, or any other regulatory agency.

Open Burning Restrictions

The Ministry of Environment has the legislative authority to restrict open burning for specified areas and periods by requiring a permit or approval to open burn. Similarly, the Ministry of Forests and Range has the ability to restrict open fires because of fire hazard. To determine if government open burning restrictions are in effect, you must call the Ministry of Environment Ventilation and Air Quality Information Hotline before you burn (1-888-281-2992 and press ‘7’ for the Omineca-Peace Region)

Open burning of industrial waste, including sawmill woodwaste, is prohibited unless separate authorization is received from the B.C. Ministry of Environment.

Exemptions to the Regulation

The Open Burning Smoke Control Regulation does not apply to:

- agricultural and residential (‘backyard’) burning of foliage, weed, crops, or stubble.

Check with your local government for any bylaws related to these kinds of burning;

- Resource management open fires

Contact your local Ministry of Forests and Range district office for more information, especially if a burning ban is in place.

Prohibited Materials

asphalt & asphalt products	biomedical waste
demolition waste	domestic waste
drywall	fuel & lubricant containers
manure	paint
tar paper	plastics
railway ties	rubber
hazardous waste	treated lumber
tires	

For information on the disposal of these materials, contact the B.C. Recycling Hotline at 1-800-667-4321.

Alternate Means of Disposal

Before lighting a fire to burn debris, you must ensure that you have reduced, reused and recycled as much of the material as possible. Burning should be the last option after reviewing all other alternatives.

Omineca-Peace Region Ventilation Indices

Prince George venting index includes:

- Prince George
- Fort St. James
- Vanderhoof
- Mackenzie

McBride venting index includes:

- McBride
- Valemout

Fort Nelson venting index includes:

- Fort Nelson and surrounding area

Fort St. John venting index includes:

- Fort St. John
- Dawson Creek
- Chetwynd
- Hudson’s Hope
- Tumbler Ridge

For all other locations, please contact your nearest regional office of the B.C. Ministry of Environment.

Penalties

Non-compliance with the Open Burning Smoke Control Regulation can result in a fine of up to \$200,000.

Report violations to the Ministry of Environment Conservation Officer Service 24-Hour Hotline at 1-877-952-7277.

Contacts

Ventilation Index

- 1) Ministry of Environment Ventilation and Air Quality Information Hotline (1-888-281-2992 Press ‘7’ for Omineca-Peace Region)
 - Ministry of Environment burning restriction and air quality advisory information-indicated on phone line by location and only when in effect;
 - Venting conditions and how to interpret them (Ventilation Zones are defined above and on the Information Line)-updated 7 days a week by 7:00am;
 - Daily air quality conditions updated weekdays at 7:30am.

2) Environment Canada Web Page:

http://www.weatheroffice.gc.ca/forecast/textforecast_e.html?Bulletin=f1cn39.cwv

Air Quality, and Open Burning Information Online

- Ministry of Environment Environmental Protection Division:
<http://www.env.gov.bc.ca/epd/>
- Ministry of Forests and Range:
<http://bcwildfire.ca/Prevention/Ads/index.htm#OpenBurning>

Other Related Agencies

- Contact your Ministry of Forests and Range district office, municipality, or fire department regarding other conditions or restrictions. Call 1-888-797-1717 to obtain a Ministry of Forests and Range Burn Registration Number.