

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 small reductions in measures of 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 including: forestry resource management, residential, land clearing development, industrial, agricultural, residential/backyard, construction and demolition waste disposal as well as resource management open fires creates smoke, and thus PM. This can effect air quality on scales from neighbourhoods to valleys to entire airsheds. Outside the Lower Fraser Valley in the year 2000, open burning contributed 37.5% of the provinces total annual PM_{2.5} emissions.

Before You Burn

- Make sure 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 '6' for Skeena 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:

- ✓ 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

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} are also generally know as *fine particles*.

Ministry of Environment

Skeena Region Smithers Office: 847 7260

Contact us to find out more about:

- General air quality enquiries or complaints.
- Regulation interpretation;
- Open burning permit applications;
- Custom Venting Index Forecasts

Bag 5000, 3726 Alfred Avenue, Smithers, B.C.,
V0J 2N0

Phone: 250-847-7260

Report Violations To

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

GUIDE TO THE OPEN BURNING SMOKE CONTROL REGULATION IN SKEENA REGION



What You Need to Know Before You Burn



Ministry of
Environment

Required Atmospheric Conditions

Burning when atmospheric conditions are favourable for dispersion prevents smoke impacts. 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 Burns Lake, Smithers, Terrace, and Stewart Smoke Control Forecasts. Refer to the Skeena Region Ventilation Zones 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 on the day of the proposed burn, lasting no longer than 60 minutes, to evaluate whether weather conditions are conducive to good dispersion. Alternatively, you can contact the Ministry of Environment Skeena Region office for a customized spot venting forecast. Call 250-847-7260.

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 '6' for Skeena Region)

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.

Prohibited Materials

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

Copies of the OBSCR

Copies of the *Environmental Management Act* and the Open Burning Smoke Control Regulation may be viewed at any government office or online at <http://www.qp.gov.bc.ca/statreg/>. Many public libraries provide internet access at no charge.

Skeena Region Ventilation Zones

Contact the Ministry of Environment for a map of the following venting index zones (250-847-7260)

Lakes District (use Burns Lake Ventilation Index)

- Nechako Drainage Basin; this includes all tributaries such as Ootsa, Eutsuk, Tetachuck, Cheslatta, Francois, and Endako Drainage Basins.
- Bulkley River Drainage: upstream of Topley
- Babine Lake Drainage: south of Topley Landing
- Naglico Hills vicinity

Bulkley Valley and Upper Skeena (use Smithers Ventilation Index)

- Zymoetz River Drainage Basin upstream of Mulwain Creek;
- Skeena River Drainage Basin upstream of and including Kitseguecla; this includes all tributaries such as the Babine (north of Topley Landing), Bulkley (downstream of Topley), Telkwa, and Morice drainages;

Inland North Coast (use Stewart Ventilation Index)

- Nass River, Portland Inlet, and Observatory Inlet Drainage Basins.

Inland Coast (use Terrace Ventilation Index)

- Kitimat and Kildala Arm Drainage Basins;
- Kitimat River Drainage Basin;
- Skeena River Drainage Basin downstream of Kitseguecla;
- Zymoetz River Drainage Basin downstream of and including Mulwain Creek.

Contacts

Ventilation Index

- 1) Ministry of Environment Ventilation and Air Quality Information Hotline (1-888-281-2992 Press '6' for Skeena 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 by 9:00am.

2) Environment Canada Web Page:

http://nat.weatheroffice.pyr.ec.gc.ca/forecast/textforecast_e.html?Bulletin=fpcn39_cwlv

Air Quality, and Open Burning Information Online

- Ministry of Environment Skeena Region Air Quality:

<http://wlapwww.gov.bc.ca/ske/epd/air/regional/index.html>

- 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.