

NADINA FOREST DISTRICT BURN MANGEMENT PLAN

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Approved by

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1. Introduction

This plan has been created in order to facilitate the burning of debris within the Nadina Forest District. The objectives are to be able to burn debris in an efficient and effective manner without negatively impacting human health, air quality, forest fire risks or social concerns.

The immediate effect is smoke that can obscure visibility and affect those with respiratory ailments that live in the immediate area.

The Ministry of Forests has a mandate to manage the burning activities of individual citizens, agriculture and the forest industry.

The primary responsibility for managing smoke within the Nadina Forest District lies with the Ministry of Environment (MOE). The Environmental Protection Director (as defined in the *Environmental Management Act*) has the authority to restrict open burning.

Fire plays an intricate role within the forest ecosystem. Controlled fire is used to

- reduce the risk of wildfire
- prepare sites for forestry and agriculture
- clear land for new subdivisions
- improve range and wildlife habitat
- dispose of other debris.

However, in its uncontrolled state, fire can be very destructive to personal property and many resources utilized by human kind.

We are committed to reducing the impact of burning on air quality and meeting the needs for public safety.

2. Purpose

The purpose of the Nadina Forest District Burn Management Plan is to:

1. Meet the requirements of Section 8 (1) & (4) of Schedule B of the *Open Burning Smoke Control Regulation* (OBSCR).
2. Identify those activities under the Forest Service mandate that generate smoke.
3. Identify smoke sensitive areas.
4. Develop strategies to lessen the effects of smoke and reduce the amount of smoke generated from Ministry and Licensee burning.
5. Ensure that all burning complies with the OBSCR.

3. Smoke Sensitive Areas (See Appendix A)

The Nadina Forest District has been broken into three levels of smoke sensitivity. A smoke sensitive area is defined as an area in which smoke could accumulate and may cause a health hazard, safety hazard, or aesthetic concern to the public.

- Zone A – High Sensitivity. Includes the Highway 16 and 35 corridors the Buck Flats road corridor, the District of Houston, the Village of Burns Lake, and the communities of Topley, Granisle, Decker Lake, Francois Lake, Southbank, Danskin, Grassy Plains, and Takysie Lake. It also includes the south and north shores of Francois Lake west of the Ferry Crossing.
- Zone B – Moderate Sensitivity. Includes those areas which lie within the WLAP smoke sensitive area and those areas where smoke could adversely effect Zone A.
- Zone C – Low Sensitivity. The remainder of the Nadina Forest District.

4. Sensitive Time Periods

1. High Tourism Periods:

The following list identifies time periods that require special considerations. Special consideration entails no burning 2 days before, during and 2 days after a sensitive time period within Zone A - High Sensitivity Area

- May, July, August and September long weekends,
- Bluegrass Festival,
- Tweedsmuir Days,
- Pleasant Valley Days
- Burns Lake Rodeo

2. Guides:

Where applicable, licensees and BCTS will consult with Guides to determine sensitive time periods for areas in which guiding operations are conducted. Burning activities will reflect agreements made.

5. Smoke Sources Under Ministry Mandate

Controlled Smoke sources under the Forest Service mandate include those prescribed activities as listed below:

- Windrows (MSP)
- Spot Burns
- Slash Piles (landing and/or road side piles)
- Broadcast Burns
- Range Burns
- Habitat Burns
- Pest Management Burns
- Fall and Burn Activities

6. General Strategies for Smoke Management

- Comply with the OBSCR except where exempted by the District Manager and this plan.
- The Custom Venting Forecasting Service provided by WLAP (Skeena Region) will be used as a priority when determining when to burn. This is a service that WLAP offers to help operators meet the venting requirements for burning under the OBSCR and the Nadina Forest District Burn Management Plan. **Custom venting forecasts can be obtained by calling 1-866-362-4986.** For more information on Custom Venting Forecasts refer to Appendix B-2, “Custom Venting Index Forecasting Services Letter 2005 / 06” on page 12. When Custom Venting Forecasts are not available other options should be utilized. These include:

1. Environment Canada’s Public Ventilation Index Forecasts for Burns Lake or Smithers (1-888-281-2992 or online at either <http://wlapwww.gov.bc.ca/epd/epdpa/venting/venting.html> or http://www.weatheroffice.pyr.ec.gc.ca/wxhealth/smoke/forecast_e.html?Smoke=YYD).

For information on whether to use the Burns Lake or Smithers Ventilation Index Forecast, refer to Appendix B-1, “Descriptions of Ventilation Zones” on page 11.

The ventilation index is calculated by multiplying the mixed layer height by the average wind speed in this mixed layer. Stronger wind speeds and thicker mixed layers produce higher ventilation index values. For convenience, the actual numbers are converted to a scale of 0 to 99.

Classification	Poor	Fair	Good
Index	0 - 33	34 - 54	55 - 99

Unless otherwise noted in this plan, ensure that the ventilation index is "Good" on the starting day of the burn and forecast to be "Good" or "Fair" on the following day. Refer to the OBSCR for further information and requirements. It can be downloaded online from

http://www.qp.gov.bc.ca/statreg/reg/W/WasteMgmt/WasteMgmt145/145_93.htm.

This interpretation of the Environment Canada Venting Index Forecast for burn initiation is consistent with the OBSCR, provided that a **burn ban**¹ under the Environmental Management Act is not in effect.

2. Environment Canada's Spot Venting Forecast (call 1-250-491-1544 to set up an account and then 1-900-565-2255 to obtain spot venting forecasts. There is a fee of \$25 per forecast and you will need to provide longitude, latitude, elevation and aspect) or a
 3. Test Burn (as per outlined in the OBSCR only).
- Refrain from burning within Zone A – High Sensitivity Area during sensitive time periods (See Section 4).
 - Extend the burning season to reduce the amount of smoke generated at one time.
 - Notify the Ministry of Transportation and Highways and the R.C.M.P. whenever smoke has an impact on highway safety.
 - Encourage alternate post logging site treatments identified within S.P.'s in line with the Ministry's prescribed burn policy and ecological guidelines.
 - Suppress wildfire aggressively to keep natural fires small, except in those areas identified in the District Fire Management Plan where fire is beneficial.
 - Encourage local municipal governments to buy into the Burn Management Plan and implement some of the criteria for their own burning permit system.

¹ Burn bans may be put in place by the Environmental Protection Director, Ministry of Water, Land and Air Protection for the purposes of pollution prevention or abatement.

7. Mandatory Practices for Smoke Management

- **All Category 3 and Resource Management Open Fires require a Burn Registration Number (BRN).** This can be obtained by calling the Ministry of Forests' toll free number 1-888-979-1717.
- **Prior to initiating an open burn, the designated burn coordinator must always ensure that a burn ban is not in effect.** This can be done by calling WLAP's Air Quality Information Line toll free at 1-888-281-2992.

8. Strategies for Broadcast Burning

General

- Broadcast burns (Resource Management Open Fire) must have an approved burn plan as per Wildfire Regulation section 23(1)
- No broadcast burns within the Nadina Forest District will be conducted 2 days before, during or after a long weekend or a sensitive time period as defined in Section 4 without the prior approval of the District Manager.
- It is recognized that broadcast burning may have a significant impact on adjacent districts and in order to try and minimize any adverse effects all broadcast burns within 25 kms of an adjacent district will be reported to that district office.
- No broadcast burns will be approved where venting is less than good on the day of ignition and fair on the first day following ignition, **as per the OBSCR.**
- Notify Nav Canada when broadcast burning will take place.

9. Strategies for Slash Piles and Windrows

General

- The Custom Venting Forecasting Service provided by WLAP (Skeena Region) will be used as a priority when determining when to burn. When a custom venting forecast is not available then the other options outlined in Section 6, "General Strategies for Smoke Management" should be utilized in combination with Table 1 on page 9.
- As a key strategy, burning will be conducted using clean, cured material. In meeting *Timber Harvesting and Silviculture Practices Regulation* requirements (Section 24(2)), there may be times in which slash may not be cured prior to burning.

- The following procedures will be followed within each sensitivity area within the Nadina Forest District:

Zone A: High Sensitivity Area:

Open burning is only permitted in accordance with all the requirements of the *Open Burning Smoke Control Regulation*. Ignition of piles are only allowed when the ventilation index is “Good” for the day of ignition and are forecast to be “Fair” or better for the following day.

Zone B: Moderate Sensitivity Area:

Unrestricted open burning is allowed when venting conditions are “Good” for the day of ignition and are forecast to be “Fair” or better for the following day (follow the requirements of the OBSCR). Conditional open burning is also allowed under “Fair” venting conditions as follows:

In Moderate Sensitivity Areas, restricted burning can occur when “Fair” venting conditions are identified for the day of ignition and “Fair” or better conditions are forecast for the following day. This is provided that the slash has been first dried at least one summer and/or is from beetle (red or grey) attacked stands. No ignition is allowed within one kilometer of any year round **residence** under “Fair” venting conditions. Ignition of new materials during fair venting should not be done whenever smoke is being blown persistently toward a High Sensitivity Area, and should be avoided during any periods of smoke build-up in the area.

No ignition of piles is allowed when the Venting Index is forecast to be “Poor” on the day of ignition or “Poor” on the day following ignition in Moderate Sensitivity Areas.

Zone C: Low Sensitivity Area:

Unrestricted open burning is allowed when venting conditions are “Good” for the day of ignition and are forecast to be “Fair” or better for the following day (follow the requirements of the OBSCR). Conditional open burning is also allowed under “Fair” venting conditions as follows:

In Low Sensitivity Areas, no ignition is allowed within one kilometer of any year round **residence** under “Fair” venting conditions. Otherwise, if venting conditions are in the “Fair” category for the day of ignition and are forecast to be “Fair” or better for the following day, unrestricted open burning may occur.

No ignition of piles is allowed when the Venting Index is forecast to be “Poor” on the day of ignition or “Poor” on the day following ignition in Low Sensitivity Areas.

Table 1 Nadina Forest District Burning Ignition Summary

Sensitivity Rating	Venting Conditions on Day of Ignition		Ignition Guidelines
	Day One	Day Two Forecast	
Zone A High	Good	Good or Fair	Unrestricted burning as specified in OBSCR
	Fair	Good or Fair or Poor	No ignition (OBSCR)
	Poor	Good or Fair or Poor	No ignition (OBSCR)
Zone B Moderate	Good	Good or Fair	Unrestricted burning as specified in OBSCR
	Fair	Good or Fair	Only material dried in piles over at least one summer or from beetle (red/grey) infested stands. No ignition within 1 km of year round residences and/or when smoke is blowing into high sensitivity areas
	Poor	Good or Fair or Poor	No ignition
Zone C Low	Good	Good or Fair	Unrestricted burning as specified in OBSCR
	Fair	Good or Fair	No ignition within 1 km of year round residences, otherwise unrestricted burning.
	Poor	Good or Fair or Poor	No Ignition

The above guidelines apply to burning of all sources of land clearing debris. These guidelines will be reviewed and updated annually or when related legislation changes.

10. Strategies for Fall and Burn Activities

General

- Burning will be conducted in accordance with **district operating procedures** and the **permit issued** by the Environmental Protection Division of MOE.
- Where possible dead trees will be included in burn piles to increase the heat levels of burn piles.
- No burning will take place in a High Sensitivity Area during an open burning ban issued by WLAP.
- No burning will take place in a Moderate or Low Sensitivity Area during an open burning ban if the smoke could affect air quality in the Highway 16 and 35 corridors.

Appendices

A. *Map: Nadina Forest District: Smoke Sensitive Zones:*

Please find attached a map of the Nadina Forest District indicating the location of the Smoke Sensitivity Zones: Zone A (High), Zone B (Moderate) and Zone C (Low).

B. Ministry of Environment:

Attached please find the following additional information supplied by MOE that will aid in the burning of debris within the Nadina Forest District:

B-1: Description of Ventilation Zones

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.
- All tributaries of the Skeena River Drainage Basin located east **and** south of Topley Landing (including Topley Landing, defined as 126° 9' 15" W and 54° 49' 3" N) as well as the portion of Babine Lake located east **and** south of Topley Landing.

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, Bulkley, Telkwa, and Morice drainages but excludes tributaries located east **and** south of Topley Landing (including Topley Landing defined as 126° 9' 15" W and 54° 49' 3" N) as well as the portion of Babine Lake located east **and** south of Topley Landing.

B-2: Custom Venting Index Forecasting Services Letter 2005 / 06

Dear Open Burning Operator,

My name is Ben Weinstein and I am the Air Quality Meteorologist for the Ministry of Environment (MOE) in Smithers. I am writing to inform you of a renewed service that MOE is offering to help you meet the venting requirements for burning under the Open Burning Smoke Control Regulation (OBSCR), the 3-day site specific custom venting index forecasting service.

As you are aware, Environment Canada issues a two-day venting forecast each morning at 7:00 AM. In some cases a two-day venting forecast is not adequate, and a three-day venting forecast can better meet the needs of burn operators. This is especially true in the Skeena Region (and the Vanderhoof Forest District) where, because of complex topography and meteorology, the venting forecasts Environment Canada issues for Burns Lake, Smithers, Terrace and Stewart do not always apply to locations outside those communities. For this reason, site specific venting forecasts are a significant improvement in protecting against pollution while opening up more days for resource management and land clearing debris burns.

My experience with custom venting forecasts dates back to October 2003 and since then I have issued numerous forecasts for all areas of Skeena Region and the Vanderhoof Forest District. Results to date demonstrate that this service does, while protecting human health through the reduction of air quality impacts from open burning, offer increased opportunity and flexibility for operators burning in accordance with the OBSCR.

There is a procedure to follow to get things under way. To properly meet your needs I will need to have your

- Burn Registration Number,
- lot location (latitude / longitude, UTM coordinates or lot number),
- approximate elevation and
- number and size of piles.

If you send this information to me I will be happy to notify you when the venting is sufficient to open burn at your location. Forecasts will be issued no later than 5:00 PM for the next three days. Should you not have email access I can call you with a forecast or fax it to a specified number. Remember though that if you want a forecast for the next day I will need your specific details by 11:00 AM.

This service is available Monday through Saturday during the Fall Burning Season and Monday through Friday during all other times of the year. It is in addition to options already in place, including:

- Environment Canada's Public Venting Forecasts for Burns Lake, Smithers Terrace and Stewart

- (1-888-281-2992 or <http://wlapwww.gov.bc.ca/epd/epdpa/venting/venting.html>),
- Environment Canada's Spot Venting Forecast
(call 1-250-491-1544 to set up an account and then 1-900-565-2255 to obtain spot venting forecasts. There is a fee of \$25 per forecast and you will need to provide longitude, latitude, elevation and aspect) or a
 - Test Burn
(as per outlined in the Open Burning Smoke Control Regulation only).

Using the custom venting forecast service does not in any way limit your ability to use these other options. If at any time the custom forecast service is not available, please use whichever other option is most appropriate.

Please note that you must always call 1-888-281-2992 before igniting piles or adding debris, to determine whether the Environmental Protection Director (as defined in the *Environmental Management Act*) has issued any burn restrictions under the OBSCR. Alternatively you can be added to an email notification list to be informed of any burn restrictions.

Use of the custom venting service does not in any way relieve you, the burn operator, from your duty to meet the requirements of the OBSCR. Due diligence in preventing pollution should always be practiced. For more information refer to your local Forest District's Smoke Management Plan or contact me (at the details below).

Continued operation of this service is facilitated through a partnership between WLAP and licensees in the region; **there is no cost for calling**. Once again, the aim is to provide a viable three day alternative to Environment Canada's two day forecasts, while reducing impacts on air quality from open burning and offering increased opportunity for operators burning in accordance with the OBSCR. Please do not hesitate to take advantage of this service.

Sincerely,

Ben Weinstein

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B-3: Nadina Forest District Open Burning Checklist

True	False	Venting Index Requirements for High Sensitivity Zones (OBSCR)
Zone A: High Sensitivity Area		
<i>If you are initiating a burn:</i>		
		Venting Index forecast is: <i>Good</i> this afternoon and <i>Good or Fair</i> tomorrow afternoon
<i>If you are adding to an existing burn:</i>		
		Venting Index forecast is: <i>Good or Fair</i> this afternoon and <i>Good, Fair or Poor</i> tomorrow afternoon

True	False	Venting Index Requirements for Moderate and Low Sensitivity Zones
Zone B: Moderate Sensitivity Area		
<i>If you are initiating a burn comprised of material dried in piles over at least one summer and/or from beetle (red/grey) infested stands and you are not within 1km of any year round residences or in an area where smoke is blowing into an area of high sensitivity:</i>		
		Venting Index forecast is: <i>Good or Fair</i> this afternoon and <i>Good or Fair</i> tomorrow afternoon
<i>If you are initiating a burn under any other circumstances:</i>		
		Venting Index forecast is: <i>Good</i> this afternoon and <i>Good or Fair</i> tomorrow afternoon
<i>If you are adding to an existing burn:</i>		
		Venting Index forecast is: <i>Good or Fair</i> this afternoon and <i>Good, Fair or Poor</i> tomorrow afternoon
Zone C: Low Sensitivity Area		
<i>If you are initiating a burn and you are not within 1km of any year round residences:</i>		
		Venting Index forecast is: <i>Good or Fair</i> this afternoon and <i>Good or Fair</i> tomorrow afternoon
<i>If you are initiating a burn under any other circumstances:</i>		
		Venting Index forecast is: <i>Good</i> this afternoon and <i>Good or Fair</i> tomorrow afternoon
<i>If you are adding to an existing burn:</i>		
		Venting Index forecast is: <i>Good or Fair</i> this afternoon and <i>Good, Fair or Poor</i> tomorrow afternoon

True	False	Additional OBSCR Requirements Mandatory in all Sensitivity Zones
		There are no open burning restrictions (ie. Burn Ban) in effect.
		Weather conditions are good for rapid smoke dispersion.
		There are no prohibited materials in the debris to be burned (please refer to Prohibited Materials section of Guide).
		The debris being burned is on the land it originated from.
		All other reasonable options (ie. reduce, reuse and recycle) have been pursued before burning.
		The burn is being conducted more than 100 metres from residences and businesses.

		The burn is being conducted more 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 applicable municipal, regional district, or improvement district bylaw.
		The burn is being conducted in accordance with the Forest Practices Code of BC and the Wildfire Regulation.
<i>If the burn is being conducted in a city, town or village:</i>		
		-The smoke release period will be less than 72 consecutive hours.
		-Open burning has not occurred on the parcel of land at any time during the preceding 15 days.
		-Smoke will not be released during open burning on the parcel of land on more than 4 separate occasions during the calendar year.
<i>If the burn is being conducted in an area other than a city, town or village:</i>		
		-The smoke release period will be less than 96 consecutive hours.

The OBSCR also requires that you ensure *local air flow will not cause the smoke to negatively impact on a nearby population or cause pollution* (see section 8(3) of the OBSCR). Once you have determined there are no local effects that would cause smoke impacts, and you have answered “True” to all the above relevant requirements, you are in compliance to burn under the OBSCR and the Nadina Forest District Burn Management Plan.