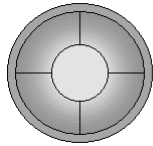


From Good Venting to Poor Air Quality: *Open Burning in the BVLD*

Contributed by the
BVLDAMP

This is part one of a two part article on open burning of land clearing debris in the Bulkley Valley-Lakes District (BVLD).

Burning of wood debris from land clearing is a necessary part of life in the BVLD. Whether you are a logger, rancher, farmer, or land developer, most of the piles of left over wood debris must be disposed of to make room for new trees, crops, grazing, or roads and buildings. Many of these debris piles must be burned in the fall or winter to limit summer wild-fire hazards, and to prevent the spread of pine and spruce bark beetles at the leading edges of the infestations currently affecting our northern



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forests. The Province of British Columbia uses regulations to ensure that Crown lands are protected from these hazards by requiring that burning take place before it is too late to minimize the hazard.

The need to burn land clearing debris must however be balanced with the need to protect people from the health effects of smoke, a risk that is typically highest on "still air" days that are common to

the 35,000 square kilometer BVLD Airshed Planning area. These still air days have poor venting conditions that are often a result of either temperature inversions that trap smoke emissions from all sources close to the ground, or by calm conditions that limit the dispersion of smoke out of populated valley bottoms.

Predicting the consequences of open burning and trying to manage those

consequences becomes a difficult task, but one that is constantly being worked on. This difficulty is the result of three factors: the large number of piles being burned at any given time, the many different categories and experience levels of operators (from foresters to farmers), and the complicated terrain found in the BVLD.

Pick any autumn in the last 10 years, and look closely at the weather patterns in the BVLD area. You will find that temperature inversions and calm weather conditions occur more and more often as autumn progresses into winter, with some years experiencing these poor venting conditions more often than others. When such conditions persist for several days or even

weeks, and a break in the weather signaling a change to good venting conditions finally occurs, huge numbers of piles are lit by people throughout the airshed. Even when venting conditions are good, a large number of piles burning can lead to poor air quality similar to what is seen on poor venting days.

A tale of 1000 burn piles

In the second week of October, a woodlot owner in the Bulkley Valley (or Lakes district) has had a Burn Reference Number from the Ministry of Forests for almost 2 weeks, and has one day left before needing to phone for another one. After checking the Environment Canada Venting Index (VI) on the Ministry of Water Land and Air Protection (MWLAP) toll free number for the 13th day in a row, the VI is now favourable to light the 5 piles left from summer logging, according to the Open Burning Smoke Control Regulation (OBSCR). Knowing that winter is coming on, he leaves the house for the woodlot just before noon to light and tend the 5 piles. These piles will most likely be burned to ash by midnight, if they are clean (no dirt) properly seasoned, and piled so that air flow occurs within the piles to aid combustion. Otherwise, they may smolder for days.

This woodlot owner is not alone, as this same procedure is being followed in 3 dozen other locations in the valley. Some are other woodlot owners, with a few piles to burn, others are cattlemen or dairymen trying to expand their grazing or forage crop land base. Then there are the 10 piles from clearing the land

to build a church on the outskirts of town, and another 10 piles from the first phase of a new housing subdivision. Three hobby farmers within 5 km of town each have 2 or 3 piles to burn. Even though they are unaware of the regulations governing burning practices, "now" seems like a good time to burn, since they can see that others have begun to burn their piles.

Unknown to all of these people, the Timber sales BC contractors and major licensees throughout the BVLD area have taken the opportunity to mobilize their burning crews and get as many of the remaining piles burned as possible, since winter is fast approaching. Since one licensee has no formal way of knowing what the neighbouring licensee is doing, each lights independent of the other, with the major licensees able to light up to 400 piles using all available crews.

The overall outcome from these efforts is that almost 1000 piles are lit during the period of sunrise to sunset on this first day of good venting in the last 13 days. Since it is late fall, the period of good venting for the day is short (related to hours of daylight). As the air cools in the late afternoon and evening, each side-valley drains its smoke-filled air down into the populated main valley. By midnight, the MWLAP air quality station in town is registering hourly fine particulate (PM10) concentrations of over 100 mg/cubic meter, well into the poor category, which starts at 50 mg/cubic meter.

The next morning at 7:00 AM, the MWLAP Regional Air Quality meteorologist notes the poor air

quality and obtains permission from the Regional Environmental Protection Manager to issue a ban on open burning of land clearing debris under the OBSCR, even though the Environment Canada VI forecast remains favourable for at least the next day. This ban is accompanied by an Air Quality Advisory, under a memorandum of understanding between the Northern Health Authority Smithers and MWLAP, since fine particulate concentrations such as this are well into the measurable health effects range.

Even though the ban is now in place, this is not a good day for the hundreds of smoke sensitive people living in the valley. Chronic conditions such as asthma and emphysema flare up, straining our health care system. Frequent episodes like this, persisting over the years cause other less obvious but more wide-spread health effects, including premature deaths due to heart disease and respiratory ailments. It is likely that at least one ambulance ride to the hospital in the next 24 hours will be attributable to smoke.

Part two of this two part article will appear next week and will focus on strategies for reducing smoke from open burning.

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For more information about the BVLDAMP, contact the facilitators at Footprint Environmental Consultants, at 847-1672, drop by the office at 102-3423 Fulton Avenue in Smithers, or visit our website www.bvldamp.ca. For more information on open burning of land clearing and other debris contact MWLAP at 847-7260.

