**Fire Hazard Assessment and Abatement on Woodlot Licence Harvest Areas**

Prompt and effective fire hazard abatement on woodlot licence harvest areas is the one of the best measures a licensee can take to minimize negative impacts from wildfires. The purpose of this Woodlot Product Development Council project is to suggest a simple, efficient format for preparing a fire hazard assessment that any woodlot licensee can use to meet the legal requirements for completing fire hazard assessments under the *Wildfire Act*.

The completion of a fire hazard assessment and fire hazard abatement are legally required under the *Wildfire Act* when a woodlot licence holder carries out an activity, such as harvesting a cutblock or road right of way that creates a fire hazard or increases the fire hazard on the area. Under section 11(4) of the Wildfire Regulation the fire hazard assessment must include “**an assessment of the fuel hazard and the associated risk of a fire starting or spreading…**“.

When completing a fire hazard assessment many woodlot licensees are continuing to use modified versions of the table from Schedule 7 of the repealed Forest Fire Prevention and Suppression Regulation under the Forest Practices Code to assess the **fuel hazard** associated with dispersed slash on harvested areas. The Forest Practices Boardand BC Timber Saleshave indicated they believe this is acceptable methodology for completing a fire hazard assessment of the dispersed fuels on harvest areas. The table from Schedule 7 (below) assigns point values for 6 characteristics of the dispersed fuel to determine a “Fuel Hazard Rating” for the dispersed fuel. If the “Fuel Hazard Rating” for the dispersed fuel exceeds 14 points then fire hazard abatement treatments should be described in the fire hazard assessment to reduce the Fuel Hazard Rating to 14 points, or preferably lower.

The table from Schedule 7 was not designed to assess the fire hazard associated with piled or concentrated harvesting slash accumulations at roadsides or landings. Therefore the fire hazard assessment must document if piled slash accumulations are present and any planned treatments to abate the associated fire hazard. Most woodlot licensees and forest professionals agree that significant slash accumulations at roadsides or landings have a “Fuel Hazard Rating” exceeding 14 points and therefore must be abated. If small piles of woody debris, stumps or rotten butt logs are going to be left for wildlife, firewood, or because they are unlikely to burn, this should be documented in the fire hazard assessment.

It is my opinion, that large slash accumulations at roadsides or landings are an obvious fire hazard that must be promptly abated and there is no need to measure or quantify the fuel hazard associated with these piled slash accumulations if the fire hazard assessment indicates this fire hazard will be abated. In talking to local Compliance and Enforcement staff, they feel justified in ticketing licensees if they find old, unburnt piles of logging slash at roadsides or on landings because they consider such slash piles to be an obvious and significant fire hazard. Most woodlot licence fire hazard assessments, I have reviewed, document the existence of any slash accumulations at roadsides or landings, and recommend treatments to abate the associated fire hazard without going into elaborate descriptions about the size, species characteristic or other attributes of these slash accumulations. Given the common characteristics of these slash accumulations, and the long held view[[1]](#footnote-1) that these large slash accumulations constitute a fire hazard, there is little need to describe the attributes of these slash accumulations if the fire hazard assessment indicates these slash accumulations will be abated.

If slash accumulations at roadsides or landings will not be abated then a separate “Fuel Hazard Rating” should be completed for the area occupied by these slash accumulations with a rationale developed by a qualified forest professional, justifying why there is no need for fire hazard abatement.

The rest of the tabular information in the proposed fire hazard assessment is designed to satisfy the legal requirement to document **the risk of a fire starting or spreading on the area**. The first factor, “Risk of Human Ignition” does not account for the risk of fire ignition from lightning strikes on the harvested area. In 2018 the BC Wildfire Service estimated that 73% of wildfires in BC were started by lightning. Historically about 50% of wildfires in BC are started by lightning. Therefore, restrictions or poor road access to the harvest area will not completely reduce the risk of wildfire ignition. Cleanly piling roadside logging slash accumulations one tree length away from the road will slightly reduce the risk of human ignition and the risk of fire spreading away from the piles, (and across the road), but will not reduce the risk of these slash accumulations being ignited by lightning.

To further document the risk of fire **starting or spreading on the area** the average slope and aspect of the harvest area are then documented on the fire assessment form since fires usually spread faster on steeper slopes and will ignite more readily and spread faster on sunnier aspects.

The last factor in the Table, “Special Factors & Nearby Values at Risk”, is designed to consider things like the risk of lightning causing fires in the area, whether the area is in a particularly dry or wet biogeoclimatic zone or site series, heavy fuel loading just outside the cutblock (i.e. blowdown or dead standing timber), strong local winds, fire history in the vicinity and values at risk such as private residences, important infrastructure, parks, trails, recreation features, fish or wildlife habitat, timber values and other values to society.

The BC Post Harvest Hazard Abatement Fire Risk Map could also be referred to at the following website to obtain an indication of how the BC Wildfire Service rates the relative fire risk of the harvest area based on proximity to communities: <https://catalogue.data.gov.bc.ca/dataset/bc-wildfire-post-harvest-hazard-abatement-map>

The points for all factors (including the fuel hazard factors), are then added to obtain the Fire Hazard Assessment Total which should guide and justify any fire hazard abatement treatments that are described. For example, if the “**Fuel Hazard Rating for Dispersed Slash**”is just below 14 but the points for average slope, aspect, special factors or values at risk cause the “**Fire Hazard Assessment Total**” to exceed 26 points (HIGH), there is most likely a need for fire abatement treatments to reduce the fuel hazard rating particularly if there are nearby values at risk like privately owned structures.

***Alan John Waters***

Alan Waters RPF# 1495 June 15, 2020.

Woodlot Licensee

**Fire Hazard Assessment Template**

**Woodlot: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CP: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block and or Road: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Licensee: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Fuel Hazard Factors** | **Fuel Characteristics and Point Rating for Dispersed Fuel** | | | | | | | |
| **Fuel Depth** | **<20 cm  1** | **20 to 40cm  3** | | | **40 to 60cm  5** | | **>60cm  7** | |
| **Fuel Size**  **(% of all fuels that are <7.1cm)** | **<15%  1** | **15 to 30%  3** | | | **31 to 45%  5** | | **>45%  7** | |
| **Horizontal Fuel Arrangement (% of area)** | **Fuel coverage <20% 1** | **Fuel coverage 20 to 50% 3** | | | **Fuel coverage 51 to 80% 5** | | **Fuel coverage >80% 7** | |
| **Vertical Fuel Arrangement of fine fuels <7.1cm** | **Mixed with soil  1** | **On the ground  3** | | | **Partially Elevated  5** | | **Mostly elevated or ladder fuels 7** | |
| **Vegetation that contributes to Fuel Load** | **None**  **0** | **Low  1** | | | **Moderate  3** | | **High  5** | |
| **Cedar Slash Component** | **<20%  1** | **20 to 40%  2** | | | **41 to 60%  3** | | **>60%  4** | |
| **Fuel Hazard Rating for Dispersed Slash or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **(*abatement is most likely warranted if the point value exceeds 14*)** | | | | | **Points** | |  | |
| **Risk of Human Ignition** | **No access**  (a gate prevents vehicle access or the cutblock was helicopter logged without road access)  1 | **Poor access**  (ATV or difficult 4x4 truck access to the harvest area)  2 | | | **Good access**  (2 wheel drive or easy 4x4 truck access to the harvest area)  3 | | **Readily accessible**  (main public road, close to town, frequently travelled)  4 | |
| **Average Slope of the Harvest Area** | | | < 10 % 1 | 11 to 30 % 3 | | 31 to 50 % 5 | | > 50 % 7 |
| **Predominant Aspect of the Harvest Area** | | | N, NE, NW -1 | E, 1 | | W or flat 3 | | S, SW SE 6 |
| **Special Factors & Nearby Values at Risk** (BGC zone and site series, Private residences, recreation features, infrastructure, fish and wildlife values, etc.) | | | This factor rates from -3 to +4 to cover the following situation(s): | | | | | Points(+/-) |
| **Low = < 20 Moderate = 20-26 High > 26+** | | | | **Fire Hazard Assessment Total** | | | |  |

**Hazard Abatement Plan for Dispersed Slash:**

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**Roadside or Landing Slash Accumulations Present:**

|  |  |
| --- | --- |
| **Yes** | **No** |

**Roadside or Landing Slash Accumulations will be burnt or abated by an Alternate Method described below:**

|  |  |
| --- | --- |
| **Yes** | **No** |

**Hazard Abatement Plan for Roadside or Landing Slash Accumulations: A rationale must be provided by a qualified forest professional if the fire hazard associated with roadside or landing slash accumulations is not proposed to be abated.**

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Comments: (adjacent fuel hazards (e.g. blowdown, dead standing timber), risk of lightning or industrial or recreation ignition, factors that decrease the fire hazard (e.g. cutblock is adjacent to a lake or the ocean). Values at risk should be described that warrant more rigorous fire hazard abatement treatments (i.e. a private residence, public road, important infrastructure, recreation sites or trails, fish and wildlife values, etc.).

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**Assessed by:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

*References: Wildfire Act, Section 7; Wildfire Regulation Section 11 & 12; Schedule 7 of the repealed Fire Prevention and Suppression Regulation under the Forest Practices Code of BC Act*

* Attach a map of the harvest area showing or describing areas of any strata with different fuel hazard ratings, planned abatement treatments of the dispersed slash or any small piled accumulations of woody debris that will be left for wildlife or not abated.

**Instructions:**

**Stratification:** On the harvested area, the dispersed slash away from any piles or accumulations at roadsides or landings should be walked to see if there are well defined areas with significantly greater fuel loading that should be assessed as separate strata. If certain areas of the dispersed slash have a higher fuel loading which warrant different fire hazard abatement treatments then two separate fire hazard assessments should be prepared for the areas (strata) with high and low fuel hazard ratings. These differing areas (strata) should be shown on the map accompanying the fire hazard assessments. If the fuel hazard rating is generally uniform for the dispersed fuel on the harvest area but adjacent values (i.e. a private residence or a main public road), require more rigorous abatement treatments on part of the harvest area then one fire hazard assessment can be completed describing the overall fuel hazard rating and appropriate abatement treatments for the areas with and without higher adjacent values. The two areas with different fire hazard abatement treatments should be shown on the map.

**Fuel Depth**: This is the average depth of woody fuels of all sizes over the area of dispersed slash. The greater the fuel depth the greater the potential for an intense fire that could be more difficult to control and extinguish.

**Fuel Size (% of all fuels that are < 7.1 cm in diameter):** Within the area of dispersed slash, estimate what percentage of the total fuel loading consists of fine fuels < 7.1 cm in diameter.These fine fuels are much more prone to rapid drying and are easily ignited, especially during the first summer after harvest when cured needles are still attached to branches.

**Horizontal Fuel Arrangement (% of area):** This is the % of the area of dispersed slash that is occupied by woody fuels of all sizes. The more continuous the fuel loading on the area the greater the fuel hazard, rate of fire spread, potential fire intensity, risk of spotting, etc.

**Vertical Fuel Arrangement of fine fuel < 7.1 cm:** Fines fuels that are mixed with soil or directly on the ground will dry slowly and be less likely to ignite for as many days out of the fire season compared to fuels that are elevated from the ground. Elevated fine fuels can also increase flame length and fire spread from wind carried embers that will travel further. The presence of any ladder fuels, (fine fuels that allow a ground fire to become a crown fire), should be documented and taken into account if they are present in a partial cut area or adjacent to standing timber.

**Vegetation that contributes to fuel load:** Take into consideration dry grass and dead sticks from shrubs that will add to the fuel loading during the fire season or provide a lower score if an abundance of succulent herbs, ferns, aspen suckers or similar lush, green vegetation will reduce the likelihood of ignition and fire spread during the fire season.

**Cedar Slash Component**: Estimate the % of the total dispersed fuel loading that is western red cedar slash. Western red cedar has the lowest kindling (ignition) temperature of any wood in BC, decomposes slowly and ignites very easily.

**Basic Fuel Hazard Rating for Dispersed Slash**: If the basic fuel hazard rating is greater than 14 points the interpretation under the Forest Practices Code was that the dispersed fuel requires abatement treatments.

**Risk of Human Ignition & Access**: The assessment of the risk of human ignition involves how far the site is from population centers, how frequently people would travel to the site and the access limitations that would discourage or prevent people from driving to where the fuel hazards are located. “No access” would mean the road is gated on private land to prevent access to the harvest area or the cutblock was logged with helicopter without road access. “Poor Access” would mean the harvest area is only accessible by ATV or difficult 4x4 truck access during the fire season. “Good Access” would mean the harvest area is easily accessed by a 2 wheel or 4 wheel drive truck during the fire season. “Readily Accessible” means the harvest area is close to town and on a main public road that is frequently travelled.

**Average Slope**: Given similar fuel loading, aspect and soil moisture regimes, steeper slopes will enhance fire spread in the direction upslope.

**Predominant Aspect:** Sunny (southern) aspects promote increased drying of fuels, easier ignition and faster fire spread while north aspects should have a slower drying of fuels due to delayed snowmelt or slightly cooler temperatures.

**Special Factors & Nearby Values:** The assessor needs to consider, document and account for any additional factors and nearby values at risk (i.e. within 2 kilometers), that decrease or increase the fire hazard on the area. This information should be included as comments.

The awarding of negative or positive points for biogeoclimatic (BGC) subzone and site series is best done by a forest professional unless a licensee who is not a forest professional receives effective training. When considering the biogeoclimatic subzone and site series, the assessor could provide 1 or 2 negative points if the harvest area was, for example, a horsetail site series in the SBSw/k subzone (SBS = Sub Boreal Spruce w = wet / k = cool), on depressional slope positions with pockets of surface water or saturated soils during most of the fire season. In contrast a juniper bluebunch wheatgrass site series in the IDFx/w 02 (x = very dry / w = warm) where ponderosa pine is often present could be awarded 2 to 4 extra points for being very dry. Unfortunately, the awarding of points for biogeoclimatic subzone and site series is subjective, but that doesn’t mean that a forest professional couldn’t help a non-professional woodlot licensee determine a point rating when they are completing the ecological classification of the harvest area in accordance with the requirements to prepare a pre-harvest map under section 33(2) of the Woodlot Licence Planning and Practices Regulation.

The biogeoclimatic BGC classification system uses two modifiers after the subzone code to describe the relative precipitation and temperature regimes of that subzone compared to other subzones in that biogeoclimatic zone. The following codes are used:

**Relative Precipitation** **Relative Temperature or Continenatality**

**Description Code Description Code**

**very dry x hot h**

**dry d warm w**

**moist m mild m**

**wet w cool k**

**very wet v cold c**

**very cold v**

**hypermaritime h**

**maritime m**

**submaritime s**

If the BGC subzone of the harvest area has codes indicating it tends to be wetter and colder, (or more hypermaritime for coastal sites), the assessor would be justified in awarding negative points. Similarly if the BGC subzone of the harvest area has codes indicating it tends to be drier and hotter, (or more submaritime for coastal sites), the assessor should award positive points.

**FIRE HAZARD ASSESSMENT TOTAL**: This provides a relatively subjective score that the assessor should consider in conjunction with whether the **Fuel Hazard Rating for Dispersed Fuels** from the table exceeds 14 points to decide if fire hazard abatement treatments are necessary for the dispersed fuels.

**Fire Hazard Abatement Treatments:** Although the Wildfire Regulation doesn’t specifically require a fire hazard assessment to specify fire hazard abatement treatments, this template is predicated on the basis that there is no need to measure or describe fuel accumulations at roadsides or landings if the assessment clearly indicates that the fire hazard associated with these fuel accumulations will be abated. Therefore the template has a check box to indicate if these piles will be burnt or space to describe other methods that will be used to abate these slash accumulations. If the plan is to not abate the fire hazard associated with fuel accumulations at roadsides or landings then a qualified[[2]](#footnote-2) forest professional must prepare a second fire hazard assessment for fuel accumulations at roadsides or landings with a rationale to justify why there is no need to abate the associated fire hazard.

The template also asks for a description of any appropriate abatement treatments for areas of dispersed fuel on the remainder of the harvest area. Abatement treatments usually include hand or machine piling and burning or grinding or chipping and removal (utilization) of roadside or landing slash accumulations.

**Time Interval Between Completion of Fires Hazard Assessments**

Section 11 of the Wildfire Regulation prescribes that a woodlot licence holder should complete a fire hazard assessment every 3 to 6 months for an area where an activity like harvesting is carried on for a longer period of time. Fire hazard assessments are supposed to be completed every 3 months for woodlot harvest areas that are inside, or within 2 km of, the boundaries of

* an improvement district,
* a water improvement district,
* a prescribed organization (e.g. a treaty first nation), or
* a fire protection district that is within in a regional district.

For more remote woodlot licence harvest areas, that are not inside or within one of these specified districts, fire hazard assessments are supposed to be completed every 6 months. If harvesting is completed on the area within the applicable 3 or 6 month interval then only one fire assessment must be completed at the conclusion of harvesting.

Periodically completing fire hazard assessments makes sense for prolonged or continuous activities like operating a dry land sort or a timber processing facility, but is probably overkill for woodlot licence harvesting operations that are usually of short duration, cover a small area of forest land (e.g. less than 25 hectares) or consist of a small area being harvested slowly over a longer period of time using hand falling, hand bucking and non-mechanized harvesting equipment. For situations where harvesting is going to take longer than the applicable 3 or 6 month period section 11(3.1) of the Wildfire Regulation allows a qualified forest professional to specify the time interval between when the holder of a woodlot licence must complete fire hazard assessments. Section 11(3.1) of the Wildfire Regulation applies to woodlot licensees and other licensees who have paid their annual rent for the year.

If a woodlot licensee has paid their annual rent for the year, a local, qualified forest professional can assess the site specific features of the harvest area and the associated values and risks. If this assessment indicates there are no unreasonable risks associated with delaying the fire hazard assessment until the completion of harvesting, the forest professional can provide a signed and sealed document specifying under section 11(3) of the Wildfire Regulation that only one fire hazard assessment needs to be completed at the **conclusion of harvesting**. To be consistent with the wording of section 11(3.1) of the Woodlot Licence Regulation the document could say that the specified interval is from the commencement to the **conclusion of harvesting** on the area (and possibly specify the applicable dates). Where a licensee knows that they will be harvesting for longer than the applicable 3 or 6 month period they should get the forest professional to provide them with this document before they are in non-compliance with the Wildfire Regulation for completion of fire hazard assessments.

The **conclusion of harvesting** would coincide with when falling, yarding, and skidding or forwarding of timber to roadsides or landings is finished on a harvest area; regardless of if some timber remains to be loaded out and hauled from the area. This definition of **conclusion of harvesting** would coincide with the logical first opportunity for a woodlot licensee who is operating in good faith to efficiently complete a single fire hazard assessment. If after harvesting a sufficient area to create or increase the fire hazard, harvesting activities are terminated on the harvest area for an indefinite period of time or more than 3 months due to weather conditions (i.e. spring break up in the interior, extreme fire hazard or the log purchaser not accepting additional timber deliveries), the woodlot licensee should complete a fire hazard assessment on the partially completed harvest area in accordance with the applicable 3 or 6 month timeline in the Wildfire Regulation. The woodlot licensee should then carry out any fire hazard abatement treatments as soon as they can be legally and safely carried out.

**A Fire Hazard Assessment Procedure Recommended by a Forest Professional**

The BC Wildfire Service 2012 publication “A Guide to Fuel Hazard Assessment and Abatement in BC” ([Guide](https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/wildfire-status/prevention/fire-fuel-management/hazard-assessment-abatement/bcws_hazard_assessment_abatement_guide.pdf)) provides a generalized methodology or default procedure for completing a fire hazard assessment but it also states that woodlot licence holders who are not in arrears in the payment of annual rent for their woodlot licence(s) “**may follow a strategy, procedure, or recommendation developed by a forest professional.**” As a qualified professional forester I am recommending that the fire hazard assessment methodology suggested in this document is a simple and efficient process that should allow a conscientious woodlot licensee to complete a fire hazard assessment and arrive at appropriate decisions about the need for fire hazard abatement treatments. I have not recommended measuring the tonnes of dispersed fuels per hectare as is suggested in A Guide to Fuel Hazard Assessment and Abatement in BC because these measurements would be too costly and with good harvesting and fire hazard abatement practices such measurements are usually unnecessary.

In the event that an “**officia**l” working for BC Wildfire Service believes fire hazard abatement is warranted where a fire hazard assessment indicates it is not, (or a fire hazard assessment hasn’t been completed), section 7(3) of the *Wildfire Act* allows the “**official**” to create a written order to require the applicable person to abate the fire hazard by a specified date.

**Who can complete a Fire Hazard Assessment on a woodlot licence harvest area?**

The assessment of a forest, forest harvest, or the fire hazard associated with forest slash after harvesting is professional forestry work that should be completed by a forest professional. Fire hazard assessments on woodlot harvest areas will typically be less onerous and less complex than on a major tenure or a silviculture survey for regeneration data. In other words, with a small amount of training from a qualified forest professional, an experienced woodlot licence holder should be able to use the fire hazard assessment template suggested in this document to arrive at suitable decisions about the need to complete fire hazard abatement treatments.

The fire hazard assessment on the woodlot, undertaken by that woodlot licensee using this template, would not be a professional assessment. Rather it would be a woodlot licensee fire hazard assessment on a specific harvest area on their own woodlot. In special circumstances, such as an elevated public or private adjacent value or risk or a harvest areas greater than 25 hectares, a licensee should choose to have their work reviewed by a registered forest professional.

A fire hazard assessment completed by a forest professional typically provides an assessment of the fuel hazards, the associated risk of wildfire and recommends appropriate hazard abatement treatments which protect the public interest, and the forest, from wildfires. It is possible for qualified woodlot licensees who are not forest professionals to complete fire hazard assessments on their own woodlot licence harvest areas using the template and instructions described in this document.

The woodlot licensee who uses this fire hazard assessment template is still ultimately responsible for accurately assessing the information they enter into the template and for promptly carrying out fire hazard abatement treatments that will effectively reduce the fire hazard, protect the public and nearby values at risk from wildfire. There is no way my signature as a professional forester on the blank template can certify the accuracy and suitability of a fire hazard assessment completed by a woodlot licensee for a harvest area I have never seen.

That being said, the fire hazard assessment template has been reviewed by many experienced woodlot licensees, industry foresters, the Association of BC Forest Professionals and experts within BC Wildfire Service. I believe it is suitable for guiding licensees through an assessment of the fire hazard on typical woodlot licence harvest areas. This document containing the fire hazard assessment template and instructions are available on the WPDC page of the website [www.woodlot.bc.ca](http://www.woodlot.bc.ca)

Anyone who has questions, requires clarification or has suggested improvements to the fire hazard assessment template can call Alan Waters, RPF at 250-747-0649 or email: [alanwaters@quesnelbc.com](mailto:alanwaters@quesnelbc.com) A woodlot licensee who is not a forest professional and wants to modify the template may email me and I will review and confirm the modifications, (at no cost), if I feel the modifications are acceptable. Alternatively a woodlot licensee who is not a forest professional can use their local forest professional to prescribe a modified version of the fire hazard assessment template or some other methodology that the woodlot licensee can then use to assess the fire hazard on their woodlot licence harvest areas.

**Suggested Best Practices for Fire Hazard Abatement on Woodlot Licences**

* Whole tree harvesting where the timber is processed at roadside or on landings can greatly reduce the dispersed fuel hazard on a cutblock because most of the limbs, tops and defective portions of trees become concentrated in slash accumulations at the roadside or on landings.
* Utilizing deciduous trees and pulp logs can also reduce the fuel loading on a cutblock. Where healthy stands of green timber are processed at roadside or landings, (particularly during the summer), there is often not enough of a fuel hazard to warrant fire hazard abatement treatments on the areas of dispersed fuel.
* Where a stand has accumulations of old blowdown, dead standing trees that are no longer merchantable, or a thick understory of unacceptable conifers, the fuel hazard associated with the dispersed slash can increase significantly and necessitate abatement.
* Winter harvesting in the interior can also significantly increase the dispersed fuel loading as frozen temperatures greatly increase the breakage of branches and tree tops during felling, skidding or yarding.
* Where trees are processed ‘at the stump’ without creating slash accumulations at roadsides or landings then the fire hazard assessment only needs to address the fuel hazard associated with the dispersed slash. Processing at the stump creates considerably more fuel loading on the areas of dispersed slash than when trees are processed at roadside or on landings.
* Where a significant amount of timber is processed at roadside or on landings, the resulting large slash accumulations will almost always represent a significant fuel hazard that warrants abatement. Such slash accumulations ignited during the dry part of fire season would burn intensely, shower the surrounding area of fresh slash with burning embers, and potentially initiate a rapidly spreading wildfire that would be difficult to control.
* Large slash accumulations should not be located close enough to standing timber to scorch the timber and increase the risk that a crown fire could occur under dry, windy conditions.

The need to abate the fire hazard associated with large slash accumulations at roadsides and landings has been well accepted for many decades in BC and standard practice resulted in these slash accumulations being burnt as soon as they are adequately cured and safe to ignite. A conscientious job of piling the roadside slash accumulations will results in more complete elimination of the fire hazard if abatement is accomplished by burning. If harvesting contractors are not closely supervised they will often leave a deep (> 50 cm) mat of limbs next to the piles of cull logs and tops and these thick mats of limbs will be very difficult to burn and regenerate. Hand or machine piling and burning dispersed slash accumulations away from roadsides and landings is an effective method of abating the associated fire hazard.

In more recent times a desire to reduce the amount of burning has resulted in some of these slash accumulations being chipped or ground into fiber that is removed and utilized. Good supervision of the chipping contractor is still required to make sure the fuel hazard is sufficiently eliminated. A few small slash accumulations are sometimes left to provide habitat for small mammals. Creating such “critter piles” away from roads, keeping these piles small and in wet locations and using deciduous logs with minimal incorporated fine fuels are all strategies that can reduce the risk of these piles being a fire hazard.

The bottom line is that **executing a high standard of fire hazard abatement on woodlot licence harvest areas is the best insurance a licensee can get in reducing the risk of wildfire destroying their woodlot licence**. Decades of wildfire research and examination of large wildfires shows that wildfire spread most rapidly in areas where there is an abundance of dry, fine fuel or old unburnt piled slash accumulations. Wildfires are much less likely to burn in old broadcast burned cutblocks (plantations) or areas where the fire hazard was adequately abated after harvesting.

***Alan John Waters***

Alan Waters RPF# 1495 June 15, 2020.

Woodlot Licensee

1. Under the Forest Practices Code there was a practice requirement to abate or remove piled accumulations of harvesting slash without carrying out a fire hazard assessment to determine if these slash accumulations were a fire hazard. [↑](#footnote-ref-1)
2. A Registered Professional Forester or Registered Forest Technologist that is qualified by training and work experience to undertake the fire hazard assessment. [↑](#footnote-ref-2)