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Operations Division

## MEMORANDUM

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June 12, 2008

To: All Forest Industry Licensees  
Regional Executive Directors  
District Managers  
Fire Centre Managers

From: T.R. (Tim) Sheldan  
Assistant Deputy Minister  
Operations Division

Re: Update on Industry Guidance related to the *Wildfire Act* and regulation

This letter serves to update the forest industry sector on recent developments related to industry guidance associated with the *Wildfire Act* (Act) and regulation. The last guidance piece issued was developed and distributed June 14, 2007. Recent discussions with industry on some key issues regarding the intent of the *Wildfire Act* and regulation has resulted in an updated bulletin. The bulletin entitled "Interpretive Bulletin on the Application of the Wildfire regulation for the Forest Industry" (attached) has been prepared to bring clarity to these issues raised by the forest industry, and has been developed with input from industry.



This bulletin provides general guidance to the industry regarding: sufficient fire fighting tools; fire suppression system requirements; representative weather data for determining Fire Danger Class for a work site; fuel break requirements; log forwarding; operating machinery with tracks, chains or studs; requirements to make resources available for fire suppression; fire hazard abatement; and, some documentation that may be helpful in demonstrating that operations conform to the requirements of the Act and regulation.

We welcome your feedback, please contact Judi Beck at ([Judi.Beck@gov.bc.ca](mailto:Judi.Beck@gov.bc.ca)) or (250 387-5782) or your local Fire Centre.

T.R. (Tim) Sheldan  
Assistant Deputy Minister  
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Enclosure: (1)

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## Interpretive Bulletin on the Application of the Wildfire regulation for the Forest Industry

### **Purpose and Scope**

This bulletin is intended to provide guidance to forest industry staff as to the intended application of certain provisions of the Wildfire regulation. This guidance is not intended to provide legal advice as to the application of legislation.

### **Background**

Two of the cornerstones of the *Wildfire Act* and the Wildfire regulation are that it is results-based and incorporates the concept of professional reliance.

The drafting of the Wildfire regulation moved the legislation to a less prescriptive framework than had been the case under the former *Forest Practices Code of British Columbia Act* (the FPC) and regulations. The FPC provisions were generally prescriptive (e.g. specific numbers of fire tools) but now the *Wildfire Act* and Wildfire regulation provisions are results based (e.g. sufficient fire fighting tools).

The requirements of the Wildfire regulation, such as providing for an adequate fire suppression system, sufficient fire fighting hand tools and fuel breaks, are examined in detail during an inspection or a wildfire investigation. This leads to a consideration of adequacy or sufficiency in the circumstances. Even if a fire starts or escapes, three defences may be raised including: due diligence; mistake of fact; and, officially induced error. A person responsible for complying with the Wildfire regulation needs to assess, in their particular circumstances, the adequacy of their fire suppression system, and the sufficiency of their fire fighting hand tools and fuel breaks. When making this assessment a person needs to consider the fire risks and exercise reasonable care. This will help to establish a defence of due diligence if a contravention is alleged. It is intended that this bulletin will bring clarity to some of these issues.

### **1. Are tools sufficient for all industrial activities?**

Under section 5 of the Wildfire regulation, sufficient fire fighting hand tools are required if there is a risk of a fire starting or spreading for a person who carries out an industrial activity on or within 300 m on an area that is forest or grass land. "a person who carries out an industrial activity at a site in that area must ensure that **fire fighting hand tools** are available at that site in a combination and type to properly equip each person who works at the site with a minimum of one fire fighting hand tool.

Definition (Reference: Wildfire regulation s. 1.):

"**fire fighting hand tools**" includes shovels, axes, pulaskis, hand tank pumps and fire extinguishers;

One procedure for assessing the adequacy of fire fighting hand tools could be to start by counting the number of workers on site, assessing the role and function of each worker, and counting the number of hand tools on site. Each worker should have access to a tool with which to carry out fire suppression work. One can expect that a person working at the end of nozzle would not require a hand tool, whereas a person building a hand guard

would be expected to have a hand tool, such as a shovel, mattock or Pulaski, suitable for the type of conditions in which the fire has occurred or could be reasonably expected on the industrial activity. Other tools such as a McLeod Tool, hazel hoes or other effective fire fighting tools can be used instead of a mattock or Pulaski, with the intent being to use the tool that is most appropriate for the conditions and type of fire suppression expected.

It is intended that the number of tools required would be dictated by the number of workers working on site. It is **not** intended that each site must have adequate tools to equip each and every person or those who may subsequently come on site to undertake fire control actions. Additional resources should come with their own tools.

With the new Wildfire regulation requirement for fire fighting hand tools, one of the first considerations for an assessment is to set your mind at all times to whether there is a risk of 1. a fire starting or 2. spreading. If there is no risk of a fire starting or spreading, for example, when snow remains on the block during the time the industrial activity is carried out, there would be no need to have fire tools on-site. The moment there is a risk of a fire starting or spreading, as defined in s.1(5) of the Wildfire regulation then there is a requirement for tools on-site.

## **2. Adequate fire suppression system requirements**

The “fire suppression system” obligations do not apply to all industrial activities. The obligations apply to “high risk activities” as defined in the Wildfire regulation, which are a subset of “industrial activities”. In addition to the “fire fighting hand tool” requirements, high risk activities carry additional obligations under section 6 of the Wildfire regulation.

### **Wildfire regulation s.6 (3)**

Wildfire regulation s.6(3)(b)(ii) states (emphasis added) – “*If there is a risk of fire starting or spreading, a person carrying out a high risk activity on or within 300m of forest land or grass land must*

- (b) keep at the activity site*
- (ii) an adequate fire suppression system”*

When interpreting this section of the Wildfire regulation it is important to examine what it actually states. The key terms are high risk activity, activity site and fire suppression system.

- “*High Risk Activity*” – is clearly defined in the regulation;
- “*Fire Suppression System*” – means a system for suppressing fire by delivering water, a suppressant or a surfactant (Wildfire regulation);
- *Activity Site* – is the location where the high risk activity is taking place.

### **High Risk Activities**

A "high risk activity" is clearly defined in s. 1 of the Wildfire regulation. These activities are also restricted at certain times when the Danger Class reaches a set threshold. Once the threshold, set out in Schedule 3, is reached additional requirements are applied to the person carrying out the activity.

### **Fire Suppression System**

High risk activities are required to have a functioning fire suppression system. A fire suppression system can potentially take many shapes and forms as dictated by the high risk activity, the risk of fire starting, and the risk of fire spreading. It may involve the delivery of water, the addition of a surfactant, the application of a suppressant, or a combination of all three. The system should be practicable and reasonable for the specific high risk activity being carried out. In addition, the fire suppression system should be capable of initial suppression of a fire of a reasonable and foreseeable size if started as a result of the high risk activity. If the system chosen involves the delivery of water, it should be nearby, operational and capable of being deployed in a reasonable length of time to suppress a fire, taking the Danger Class into consideration.

The proximity and complexity of the fire suppression system should take into consideration the time to arrive to support the operation. As the fire danger rating increases, the available time to deploy a fire suppression system to support the operation decreases. Larger, more mobile systems may be located in a central area and serve several high risk activities, while smaller, less mobile fire suppression systems may be located in strategic positions or on the machine itself, for use by the operator.

Some considerations for a fire suppression system may include:

- *the ability to be activated quickly;*
- *the number of high risk activities to be serviced by the fire suppression system;*
- *the presence or absence of any potential fire suppressing materials that may be utilized (i.e. soil)*

It is not expected that a person would have to maintain a fire suppression system to address every eventuality; rather, it is expected that the system would be adequate to address a fire starting from the high risk activity being carried out giving due consideration to the fire environment at hand (weather, fuels, topography). The assignment of a reasonable risk of a fire starting and spreading should be applied based upon available information, one example may be the Canadian Forest Fire Danger Rating System (CFFDRS), probability of ignition models or established local fire history for that industrial activity under the site and environmental conditions at hand. For convenience, some Licensees may choose to maintain a prolonged readiness level for higher fire environments rather than consciously escalating or diminishing readiness as site conditions change.

### **Activity Site**

The activity site is the location where the high risk activity is taking place. It includes both stationary activities (i.e. milling, portable chipping, and manufacturing) and mobile activities (i.e. mobile logging equipment).

#### **i) Stationary Activities**

The activity site of a stationary, high risk activity would be the area in the immediate proximity of the high risk activity.

#### **ii) Mobile Activities**

Activity sites for mobile, high risk activities are more difficult to define with regards to area and in time. These sites may be assessed in terms of the specific location where the activity is taking place or where the activity has taken place on a given day. It is not intended to be the potential area where the activity could take place.

Key aspects of an activity site may consider:

- *the risk of a fire starting, and*
- *the risk of a fire spreading*

### **3. How would a person carrying out high risk activities, obtain representative weather data to determine the Fire Danger Class?**

The Ministry of Forests and Range's (MFR) weather network was designed to support fire preparedness planning for the provincial government's fire operations. This weather network was not designed or intended to accurately describe all potential, site specific, fire environments across the province.

Under section 6 of the Wildfire regulation, those persons conducting high risk activities are required to determine the Fire Danger Class for the location of the high risk activity. To determine Fire Danger Class, the person carrying out the high risk activity must reference the representative weather data for the area in which the activity is taking place. It is up to the person carrying out the activity to determine the representative weather station for the area. The source of this data could be internal weather stations, from third party stations, or from the Ministry of Forests and Range weather station network.

Data from the nearest weather station may not necessarily be the most representative data for the activity site. When considering if weather information from a given station would be representative of a given work site, a person may want to compare their specific site conditions with that of the source of the weather data to ensure they are reasonably similar. Factors to consider might include slope, aspect, elevation, date of snow melt, or the distance from the weather station.

The MFR, Protection Branch's public website (<http://bcwildfire.ca/>) will continue to display current and forecasted Fire Danger Class for every Ministry weather station. This information is found under the heading of "Fire Danger Rating" and then "Danger Class Report". Accurate locations and elevations of stations are to be found under the "Weather Station Locations". More detailed information on the Canadian Forest Fire

Danger Rating System, along with other weather information can be found in the reference material that has been written by Turner and Lawson (1978)<sup>1</sup>.

#### 4. Addressing sufficient fuel break requirements

**“Fuel Break” – means**

- (a) a barrier or change in fuel type or condition, or
- (b) a strip of land that has been modified or cleared to prevent fire spread;

(Reference: Wildfire regulation s.(1.)”

First, it is important to remember that a sufficient fuel break does not necessarily mean a bladed guard. Anything – natural, engineered or constructed that modifies or removes the fuel so that there is no reasonable chance of a fire spreading would be acceptable. For example, snow, water, natural bare rock or high fuel moisture could be a sufficient fuel break. A fuel break may also be created using a sprinkler system that increases the moisture content of fuel above its ignition point, or it could be that the complete removal of fuel to mineral soil would also constitute an adequate fuel break. When constructing a fuel break, due consideration should be given to the fire environment at hand (weather, fuels, topography).

It is also important to remember that in a results-based regime, we would not commonly assess the sufficiency of a fuel break until after fire escapes beyond the fuel break, as part of an incident inspection or investigation. It is also understood that there are conditions under which a fuel break could not completely prevent a fire from spreading.

The requirements for a sufficient fuel break under section 7 of the regulation for ‘wood processing’ or “wood sorting” are intended to capture processing that is done on sites such as a dry land sort or mill yard. Section 7 does not apply to log processing or sorting activities that are conducted as part of harvesting activities on a cut block. Also note that the requirement under section 8(f) for a fuel break for an engine over 7.5kw that is “stationary or semi-permanent” does not apply to log processing activities that are conducted as part of harvesting activities on a cut block where the equipment could be considered ‘stationary’.

There are situations where it is obvious that the existing fuel break or the lack thereof would not be sufficient to prevent a fire from spreading beyond the area given reasonably expected fire conditions. The fact that a fire escapes does not automatically infer non-compliance with fuel break requirements.

#### 5. Log forwarding

“Log forwarding” is included as a high risk activity, and should be interpreted as the use of a self-propelled machine, usually self-loading, designed to transport trees or parts of trees on a cut block. The definition of log forwarding in the regulation specifically excludes a logging truck on a road. Therefore, a self-loading logging truck on a road or

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<sup>1</sup> Turner, J.A.; Lawson, B.D. 1978. Weather in the Canadian Forest Fire Danger Rating System. A user guide to national standards and practices. Environment Canada, Pacific Forest Research Centre, Victoria, BC. BC-X-177.

landing would not be considered log forwarding. If however, the self-loading logging truck drives off the road out onto a setting, it could be included as log forwarding. Note that "skidding logs" is not included in "log forwarding", but is included as a separate part in the definition of high risk activity.

## **6. Machinery with tracks, chains or studs**

The Wildfire regulation defines a number of items as "high risk" activities. It states in subsection (p) that "operating a vehicle with metal tracks, chains or studs is considered a high risk activity", but outlines exceptions to this under subsections p(i) and p(ii). A log loader operating at roadside is considered to fall within the exceptions outlined in p(ii). A loader operating at roadside includes; loaders that may be positioned over the roadside ditch, on debris, slash or operating on undisturbed forest floor material adjacent to the road. If the loader moves from one log deck to another log deck, or repositions between loading trucks, this would not be considered a high risk activity. Under the former FPC Forest Fire Prevention and Suppression (FFPS) regulation, log loading was not considered a high risk activity (A or B).

Where a person decides to operate a tracked machine loading logs off the road in slash, there is an obligation for the person to be duly diligent regarding s.6 of the *Wildfire Act*, which specifies that a person who carries out an industrial activity must do so; "at a time, and in a manner" that can reasonably be expected to prevent fires from starting because of the industrial activity.

## **7. Requirement to make resources available**

For the purpose of section 13(1)(a) of the Wildfire regulation, it is important to note that the person is only required to make resources (manpower, fire fighting tools and heavy equipment) available if the resources are within 30 km by road. Section 13 of the Wildfire regulation specifically excludes employees, contactors or agents working at a non-portable timber processing facility (pulp or saw mill), or workers in a clerical or administrative capacity from this requirement.

The intention of this provision is not to impact stationary processing facilities (mining operations or otherwise). Barge camps, the barge and its employees are not resources that the person must make available for fire control activity. If these facilities, other employees or equipment are required, there are specific sections of the *Wildfire Act* (s.16) under which an official may issue a requisition order that requires a person to supply any facilities, equipment or employee for fire control.

## **8. Fire hazard abatement requirements**

The focus of this section is on ensuring that a hazard is abated when required. An abatement requirement exists when the industrial activity or prescribed activity (waste disposal site, dry land sort, or camp) creates or increases a fire hazard or is likely to do so. It should be noted that activities such as road maintenance (grading a gravel road), grazing, planting, surveys, block layout, and conducting inspections will not be required to carry out a fire hazard assessment because these activities do not create or increase the fire hazard.

The content of a Fire Hazard Assessment under the *Wildfire Act* could be the same as that contained in schedule 7 of the old FFPS regulation. Alternatively, industry may want to develop its own assessment process. If so, it should consider an assessment of the fuel characteristics, the risk of a fire starting, the potential for fire spreading, as well as any values that may be threatened. Three main factors that may be considered are fire occurrence, fuel characteristics, and potential values threatened. An assessment may contain a number of sub-criteria evaluated in the context of the local area such as:

**Fire Occurrence:**

When considering fire occurrence, one may consider historical fire occurrence, lightning frequency, person caused frequency, presence of industry operations, level of access, etc.

**Fuel Characteristics:**

When assessing the fuel characteristics, some items one may consider are fuel depth, fuel size, horizontal fuel arrangement, vertical fuel arrangement, vegetation, the slash component, fuel continuity, etc.

**Potential Values Threatened:**

When considering values threatened, one could consider the distance to interface areas, utility infrastructure, the level of public use, the presence of other special features, etc.

The intent of this section is that when an assessment identifies that a fire hazard is present, it must be abated.

**9. Documentation**

Persons carrying out the industrial activity need to practice due diligence by being prepared for wildfires. When a fire occurs, Licensees may want to document readiness, for example, the number of tools, people on site, and types of machinery on site, fuel breaks, site conditions, weather information, Fire Danger Class, etc. Recording this information may assist the person conducting the industrial activity in demonstrating to Ministry of Forests and Range staff how they conform to the requirements of the *Wildfire Act*.



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