
Directive No. 2007-01 **Date** November 21, 2007

Subject **Fire Salvage Planning and Operations**

Purpose Timely and effective fire salvage planning and operations.

The objective is to utilize as much of the fire-killed timber as possible within two years of the fire event, while maintaining environmental values.

**Policy &
Procedure** **Timber Allocation**

Companies with timber tenure in the burned area have the first opportunity to obtain fire-killed timber.

Companies will submit a written *Notice of Intent to Salvage*, which will assist Alberta in completing the allocation of available salvage timber. The notice will outline the amount of volume for salvage, what stand types will be salvaged and applicable stand/tree utilization standards, by FMU, and the quadrant allowable production for the tenure.

Alberta may issue competitive timber salvage permit if unallocated fire-killed timber is available. Further, Alberta may restrict companies from harvesting green timber in any area where dead or damaged timber is sufficiently available (Timber Management Regulation s. 164(a)).

Operational Planning

Fire Salvage Plans are required for:

- Fires of any size where more than one timber tenure holder in the forest management unit has provided a *Notice of Intent to Salvage*.
- Fires that affect more than 1,000 hectares of productive forest landbase. In this case a less detailed version may be acceptable to the Area Manager should the amount of merchantable timber and forest values affected be limited.

For fires that affect less than 1,000 hectares of productive forest landbase and that affect only one timber tenure holder, proposed ground rule variances and justification will be described in the Annual Operating Plan (AOP) for salvage harvest.

The contents of a Fire Salvage Plan are found in the **Appendix** of this directive. A single Fire Salvage Plan is to be developed by the FMA holder, or in non-FMA areas, the quota holder intending to salvage the highest volume within the fire boundary.

Annual operating plans (AOPs) are required but Alberta may allow for operations to proceed while aspects of the AOP (ie. reforestation program, fire control plan) are under development to enable timely operations. The Area Manager, based on specified

criteria, may provide written approval to modify specific ground rules for AOP development and amendments to AOPs.

Alberta may approve the inclusion of unburned areas of green timber within the boundary of the fire salvage planning area where the volume of fire salvage is too low to be feasible for harvest.

Timber Supply Analysis

Annex 1 of the *Alberta Forest Management Planning Standard* outlines the requirements for timber supply analysis. Appendix B of Annex 1 outlines specific strategies principles and assumptions related to wildfire and timber supply analysis.

The Executive Director of Forest Management Branch may request an analysis of impacts to be prepared to assess the impacts of the wildfire on timber resources and other values in order to determine whether changes to the forest management plan are required. Where the Executive Director deems impacts to be significant, forest management plan amendment or a revised forest management plan may be required.

Reforestation

Unless otherwise approved by the Minister, reforestation of salvaged fire-kill timber is a fundamental requirement. Mandatory reforestation applies to all salvage harvesting under competitively sold commercial timber permits.

Harvest areas (cutblocks) that have met reforestation standards, or that have not met reforestation standards but have been treated to meet standards (through any one of the following: site preparation, planting, seeding, regeneration survey), and that are subsequently burned by wildfire, are eligible for reforestation funding from Alberta, through a grant agreement with the Forest Resource Improvement Association of Alberta (FRIAA). The funding is intended to replace reforested cutblocks destroyed by wildfire and reduce the negative economic, environmental, and social impacts of forest loss due to wildfire. To qualify for funding under FRIAA's Wildfire Reclamation Program companies must agree to fulfill their reforestation obligations to the Crown including treatments required to meet the then current regeneration performance standards. Where a company receives funding under the FRIAA Wildfire Reclamation Program, exemptions to reforestation of such areas due to wildfire will not be granted pursuant to Timber Management Regulation s. 143.7. A listing of burned over harvest areas for which companies wish to access FRIAA funding, will be supplied to Alberta annually by October 1.

Should companies choose not to reforest burned harvest areas, and not access FRIAA grant funding, they may apply for an exemption from reforestation within one year of the date of burn, pursuant to Timber Management Regulation 143.7. Appendix B of Annex 1 of *Alberta Forest Management Planning Standard* outlines the procedures for burned cutblock updates in ARIS.

Utilization

Alberta may approve adjustments to the utilization standards for harvesting operations. The utilization standard for the approved AAC will be maintained for timber production and scaling purposes. Variance from the utilization standards in the ground rules, and justification, will be described in the Notice of Intent to Salvage, Fire Salvage Plan or AOP.

The following utilization specifications are guidelines to be used should the company choose to vary from the utilization standards in their approved operating ground rules:

Stand Utilization - Destroyed stands and green stands should be left unharvested, although its recognized that there may be some green islands and patches, not required for structure retention purposes, that may require harvest due to high blowdown risk. Burned and damaged stands should be harvested with 15/11 utilization standards. Other utilization standards within the burned stands and damaged stands may be acceptable on an operational basis, if justified and approved in the Notice of Intent to Salvage, AOP or Fire Salvage Plan.

Tree Utilization

Trees are considered green if less than 0.9 meters of char exists when measured from the ground (0.3 meter stump allowance + 0.6 meter bucking allowance). Charred wood on green trees, including charred catfaces, knots and other defects, can be bucked out. Trees are considered fire damaged if char is 0.9 meters or greater when measured from the ground. Top size - normal top size for green tops. Burned tops may be bucked back to a char-free point. Piece size rules are waived for burned stands.

Timber Dues & Scaling

Fire killed salvage is considered dead wood and the applicable dead timber dues rates will be applied. Residual areas of green timber within the fire perimeter, which show evidence of blowdown, may be treated as endangered timber for dues chargeability purposes.

Scaling

All timber must be segregated and scaled in accordance with Alberta scaling requirements. Operators will contact the Area Office to organize scaling populations for fire salvage.

Fire-killed timber from the same fire and delivered to a specific mill may be grouped into a single scaling population where the log haul profile is unsorted, and the species, and harvest utilization standard are the same. Where logs are sorted for specific reasons (i.e: building logs versus post/poles) it will be necessary to create separate scaling populations and segregate and measure each population separately. Loads will be recorded by harvest areas (cutblock), and burned and green harvest areas (cutblocks) are to be numbered separately.

Debris and Chip Disposal

Disposal and pile retention activity shall follow the standards outlined in the Directive on Debris Management Standards for Timber Harvesting Operations and the Forest and Prairie Protection Regulations. Companies will identify how debris and chips will be disposed of in the *Fire Salvage Plan*, and AOP.

Portable Sawmills

Portable (bush) sawmills may be considered in fire salvage operations. Alberta must approve the site waste management, debris disposal, production control, fire preparedness and reclamation tactics. Portable sawmills require a land use disposition

approval, a sawmill permit, a development permit in some municipalities, and an approved fire control plan (including debris disposal) which may be part of the land use approval. Clauses 12(1) to 12(5) of the Forest Prairie and Protection Regulations Part II cover the requirements for Debris Disposal for Sawmills and Planing Mills.

Structure Retention

Guidance on the amount and configuration of structure to retain is found in applicable ground rules and if available, the forest management plan structure retention strategy. Should guidance not be specific to structure retention in wildfires, the following applies:

Fires that affect <1000 hectares of Productive Landbase

Patch and single tree retention in harvest areas (cutblocks) will follow the standards in the applicable ground rules. In addition, patches retained should represent a range of burn severities from “destroyed” to “burned” to “damaged” (see Appendix, s. 1 for definitions).

Fires that affect >1000 hectares of Productive Landbase

Retention of Unburned Forest - unburned (green), windfirm areas of 4 ha and greater will be retained as structure.

Retention of Burned Forest- 10-25% of the merchantable burned trees within the fire boundary will be retained. For fires greater than 10,000 hectares, the 25% target is mandatory. Retention of large, continuous patches, representing the full range of burn severity, is preferred. The intent is to retain patches of large size trees which can be a limited feature on the landscape post-fire salvage harvesting. The 25%¹ target translates to a set of multi-scale targets as follows:

Fire Scale - Leave a minimum of 10% area of netted down merchantable black timber in patches > 100 ha, or the largest patch size available within the fire, if the area of merchantable timber burned is limited. Areas retained should represent a range of burn severities from “destroyed” to “burned” to “damaged”. Merchantable timber in riparian areas and inoperable areas can contribute to this target area.

Harvest Area (cutblock) Scale - Leave a minimum of 10% area of merchantable black timber in patches greater than 10 ha. Leave a minimum of 5% area of merchantable black timber in patches less than 10 hectares and single trees, with preference given to larger trees. Retained patches should represent a range of burn severities from trees that are extensively charred to those with only partial blackening or root burn. Merchantable timber in riparian areas within the harvest area boundary does not contribute to the target areas at the harvest area scale. However, merchantable timber in inoperable areas within the harvest area boundary does contribute to targets.

¹ For fires less than 10,000 hectares the minimum target of 10% retention of merchantable burned trees within the fire boundary translates to: Fire Scale – 4%, and Harvest Area Scale – 4% in patches greater than 10 ha, 2% in patches less than 10 hectares and single trees. The same guidelines apply as with 25% retention.

Authorities Timber Management Regulation 164

FMA clause related to following the Forest Management Planning Manual published by the Minister.

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Approved *Original Signed*

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Appendix - Fire Salvage Plan Requirements

The following is required in a Fire Salvage Plan:

1. Volume Estimates & Assumptions (Coniferous/Deciduous)

The following points require consideration and are to be included in the initial phase of the *Fire Salvage Plan*:

- *Utilization Criteria & Assumptions* - Volume estimates depend on the utilization criteria and assumptions that are used in describing them. Companies are to describe in detail their current method of determination (eg. AVI stands, greater than 14m, 15/11, etc.) and their plans to fine tune the information.
- *Fire Stratification* – The merchantable stands within the fire should be categorized and mapped accordingly:
 - *Destroyed* - majority of trees (>50%) burned into wood, extensively charred, not easily useable, splitting is often evident
 - *Burned (Black)* - majority of trees in stand are burned with blackened bark over most of the stems and/or some charring of wood. Trees potentially useable with processing
 - *Damaged* - partially burned stands where some trees are blackened with unburned bark evident on trees. This includes root burnt trees
 - *Green* - Trees are not burned.
- *Planned Inventory Enhancements* - Plans are to be outlined as to any enhancements the company plans to do in refining their data whether it be additional photography/imagery or photo interpretation.

2. Salvage Allocations (Coniferous/Deciduous)

Outline the distribution of firekilled salvage by providing detail on the following:

- The split amongst the Existing Tenure Holders - FMA, Quota, DTA, Community Timber Programs
- The fire salvage supply identified for other FMA volume agreement commitments. Documentation for the above (eg. letters transferring or relinquishing shares)
- The fire salvage area and volume available for competitive bid.

3. Integration with Other Interested Parties (Coniferous/Deciduous)

A description is to be provided as to how the companies plan to accommodate the interest in any unused salvage volumes expressed by other parties (eg. Alberta FMA/Quota Holders, Community Timber Program, Posts & Poles (Commercial), firewood interests) recognizing the various utilization opportunities that these companies and individuals may bring. Integration strategies for considerations such as access, incidental volumes, plan referrals, adherence to the *Fire Salvage Plan*, etc. are to be identified. This must be done in consideration of allocations being managed by the Department.

Should companies not be able to reach agreement on allocation, the Department will provide direction based on the proportionate share of timber allocation under tenure, and any other relevant considerations provided in writing by the parties interested in the salvage timber.

4. Harvest Priorities

Recognizing the tight time schedule (approximately two years), companies are to describe their strategy to salvage the fire-killed timber identifying their priorities by species composition, burn intensity, accessibility, and merchantability class, complete with locations (mapped), volumes, season and timelines. The harvest sequence should reflect the priority listing and demonstrate that as

much perishable timber as possible will be utilized given the planning constraints and timelines. It is understood that this component of the plan is dynamic and will be updated as more information is acquired.

- 5. Salvage Utilization Standards & Merchandizing Practices (Coniferous/Deciduous)**

The companies are to identify the utilization standards they intend to follow: 1) those found in their operating ground rules, 2) the guidance in this policy, or 3) a variation of 1) and 2) with justification. It's recognized that each fire is unique and each company has its own requirements, facilities and abilities to utilize the firekilled salvage.
- 6. Chargeability & Scaling Protocol**

Each company must identify their timber production accounting practices and strategies, and any proposed variance from the ground rules, policy, or procedures.
- 7. Variation from Operating Ground Rules**

It's recognized that some operating ground rules may not be applicable to harvesting fire-killed salvage. The companies are to identify proposed variation from their existing ground rules and supporting rationale. The underlying intent and objective of the approved ground rules must be maintained with proposed variances.
- 8. Access and Reclamation Plan Coordination**

Access planning is key to harvest operations and reforestation. Access development has the potential to "open" up previously inaccessible areas, as well as impact soil and water resources through erosion and sedimentation. Companies are encouraged to utilize existing fireguard and access trails, where it aligns with their access plans and if environmentally acceptable, coupled with quick reclamation to minimize the footprint on the landscape. Further, reclamation should be coordinated with the local SRD Area reclamation plan for the fireguard and access trails.
- 9. Reporting Protocols (including as built/cut reporting)**

Most companies already have formulated an agreement with their local SRD Area regarding reporting of forest operations. Direction is also outlined in the Directive 2006-04 – *Timber and Reforestation Operations Monitoring*. Additional communication is expected between the company and local SRD Area Office in fire salvage situations given the expedient timing of planning and operations. The company will outline their communication protocol with the local SRD Area, as well as-built reporting and mapping for harvest, access, and watercourses.
- 10. Reforestation Considerations**

Requests for reforestation waiver or exemption must be outlined in the Fire Salvage Plan. The request should identify the applicable cutblocks for which an exemption is requested (both salvage and burned reforested cutblocks), and provide justification for the exemption.
- 11. AAC Determination**

The companies are to identify whether greater than 2.5% of the net productive landbase in the forest management unit was affected by the fire, or if not, whether a recalculation of AAC is requested by the parties. For non-FMA forest management units, SRD will determine whether or not the 2.5% threshold has been reached.
- 12. Debris Disposal**

Outline the debris management methods to be employed per the approved methods in the directive on Debris Management in Forestry Operations