



Timber harvest planning and operating ground rules

Lesser Slave Lake
Regional Forest Management Plan-Specific Addendum -
S16, S17, S19, S20, S21 and S24

The logo for the province of Alberta, featuring the word "Alberta" in a stylized, cursive script font, followed by a small square icon.

Lesser Slave Lake Regional Forest Management Agreement Specific Addendum-Timber Harvest Planning And Operating Ground
Rules 2023

2023

Lesser Slave Lake Regional

**FOREST MANAGEMENT AGREEMENT SPECIFIC
ADDENDUM-TIMBER HARVEST PLANNING AND OPERATING
GROUND RULES**

Tolko Industries Ltd.

**West Fraser Mills Ltd.(Slave
Lake)**

Vanderwell Contractors Ltd.

ALBERTA

**FORESTRY, PARKS AND
TOURISM**

ENDORSEMENTS

The Lesser Slave Lake Regional Timber Harvest Planning and Operating Ground Rules, having been prepared in accordance with Section 16 (2) of FMA 0600043, 9700036, 9200039, 9700033 and Section 11 (2) of FMA 9000028, and hereby endorsed this 17th day of April, 2023. The Executive Director of Forest Stewardship and Trade Branch has determined these ground rules will apply to all operations within the aforementioned FMAs as well as FMU S10 and S02.

Alberta Plywood, Slave Lake Pulp, and High Prairie
Forest Products-Divisions of West Fraser Mills Ltd.

HIS MAJESTY THE KING in right of Alberta as
represented by the Minister of Forestry, Parks
and Tourism

Original Signed

Original Signed

Per: _____

Per: _____

Tracey Courser _____
(print name)

Ken
Greenway _____
(print name)

Woodlands Manager

(title)

Executive Director

(title)

Tolko Industries Ltd.

Original Signed

Per:

Travis Romanchuk_____
(print name)

Woodlands Manager (Acting)

(title)

Vanderwell Contractors (1971) Ltd.

Original Signed

Per: _____

Mike Haire_____
(print name)

Woodlands Manager

(title)

Preamble

The Timber Harvest Planning and Operating Ground Rules – FMA Specific Addendum (the “Addendum”) is a reference manual that provides regulatory guidance and direction to be used by timber harvest planners, forest operators and other forestry professionals involved in implementing forest management plans (FMP). Items within the Addendum are required for implementation of unique or specific strategies within the FMP and/or are specific to an individual FMA. The Addendum will work in concert with the standardized Provincial Timber Harvest Planning and Operating Ground Rules (Provincial OGR). The Addendum is Section 4 to Sections 1, 2 and 3 in the Provincial OGR. Rules found in the Addendum will supersede those found in the Provincial OGR when they address the same objective.

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Introduction

These Addendum Ground Rules will supersede rules in the Provincial OGR where there are rules addressing the same objective.

Authorizations and Legislation

This Agreement inures to the benefit of and is binding upon the Crown and His heirs, successors and assigns, and the Company and its successors and assigns.

4.1 Timber Harvest and Reforestation Planning Requirements

4.1.1 Plan Submission Dates

GROUND RULES

- 4.1.1.1 The GDP submission date is July 1 of each year unless otherwise approved by Alberta.
- 4.1.1.2 The AOP submission date July 1 of each year unless otherwise approved by Alberta.
- 4.1.1.3 The reforestation program shall be submitted:
 - a) before April 15 for silviculture operations commencing between May 1 and October 31;
 - b) before September 1 for silviculture operations commencing between November 1 and April 30; or
 - c) as otherwise specified in an FMA, or at a time agreed to by Alberta.

4.1.2 Annual Operating Plan

GROUND RULE

- 4.1.2.1 Planned harvesting within 50 metres of locations of existing arctic grayling streams as identified using the Fisheries and Wildlife Management Information System (FWMIS), and the associated Fish and Wildlife Internet Mapping Tool (FWMIT) and mitigation planned shall be included as supplemental information as part of a non-standard submission.

4.2 Operational Ground Rules

4.2.1 Harvest Area Design

GROUND RULE

- 4.2.1.1 Line of sight shall be minimized where harvest areas are adjacent to accessible permanent DLO roads. Targets for the limits of sight distance shall be 400 m.

Uncommon Plant Communities

BEST MANAGEMENT PRACTICES

- Alberta Conservation Information Management System (ACIMS) and other available rare eco-site data should be referenced during harvest area and road design and layout;

GROUND RULE

- 4.2.1.2 When uncommon plant communities as listed in Table 5-18 in Chapter 5 of the FMP, these will be maintained.

4.2.2 Visual Impacts

GROUND RULE

- 4.2.2.1 Areas with visual quality concerns raised through consultation shall be assessed and tactics shall be employed in the GDP and/or AOP to mitigate the impacts of harvesting and reforestation on visual quality.

S17 AND S20 SPECIAL MANAGEMENT AREAS (SMA)- Lesser Slave Lake SMA and Fawcett Lake SMA

GROUND RULES

- 4.2.2.2 Harvest areas within the modified harvesting zone 100 m to 400 m from Lesser Slave Lake and Fawcett Lake, as per FMP Chapter 7, Section 3.4, shall be assessed to determine the likelihood of being seen from the lake and support the development of appropriate mitigation of visual impacts. Where the assessment determines mitigation is necessary, those prescribed actions shall be incorporated into the final harvest design.
- 4.2.2.3 There shall be no harvesting activities (felling/bunching, processing) inside of the Special Management Areas between May 1 and September 30 of each year.

Highway 754 Identified Aesthetic sites

- 4.2.2.4 For any proposed harvesting within 100 metres (at closest point) of Highway 754 to Wabasca, supplementary information in the AOP shall provide detail on buffering actions taken to ensure the visual quality is maintained. The details will include width of buffer proposed as well as composition of buffer including tree species and height.

4.2.3 Understory Management

S17 (FMA0600043) Only

GROUND RULE

- 4.2.3.1 Any harvest openings proposed for Understory Protection as described in FMP Chapter 6 Section 4.8 and Annex III (GY) shall be identified in the GDP and AOP with protection details provided as supplemental information in the AOP.

4.2.4 Structure Retention

DISCUSSION

Retention of pre-harvest trees, snags, and woody debris within harvest areas is an important ecological value. It is a value related to local, stand-level biodiversity. Retaining mature trees within harvest areas increases the structural diversity of the regenerating stands and leads to both vertical and horizontal structure in the short and long term. It provides a level of old growth values over the early development of regenerating stands. In addition, stand level structure retention provides a variety of habitats which can be utilized by a number of boreal species.

For the purpose of achieving stand-level structure retention values, timber operators will utilize a variety of patterns and tools to achieve the overall objective and target outlined in the associated VOIT #10 (1.1.2.1). For monitoring and reporting purposes it is understood that a harvest area is the equivalent of a cutblock with its own unique opening number used for tracking all other forest management commitments.

The objective of this strategy is to provide guidance to harvesting operators in order to achieve the stand-level structure retention targets described in VOIT #10 (1.1.2.1) and to provide guidelines for the required quantification and reporting of the VOIT.

Structure retention shall consist of area containing non-harvested, representative timber stand types within the harvest area. Where larger harvest areas are created, it is important to also retain individual trees, snags, and residual tree patches distributed across the harvest area. These residual tree patches shall be located such that natural features, riparian areas, wildlife features, stand structure and composition, and proximity to standing forests are considered to maximize their utility or usefulness by the biotic community. At the operational level patches retained for structure retention will assist in meeting other wildlife objectives. Patches will be left to minimize line of site objectives, meeting distance to thermal/hiding cover and providing connectivity with harvest boundaries for travel. These patches may be identified before harvest and removed from the harvest area or implemented operationally using technology such as GPS mapping etc. Stand structure shall not be retained in harvest areas where forest health issues warrant eradication of all affected mature tree species to combat infestations and diseases (*i.e.* mistletoe).

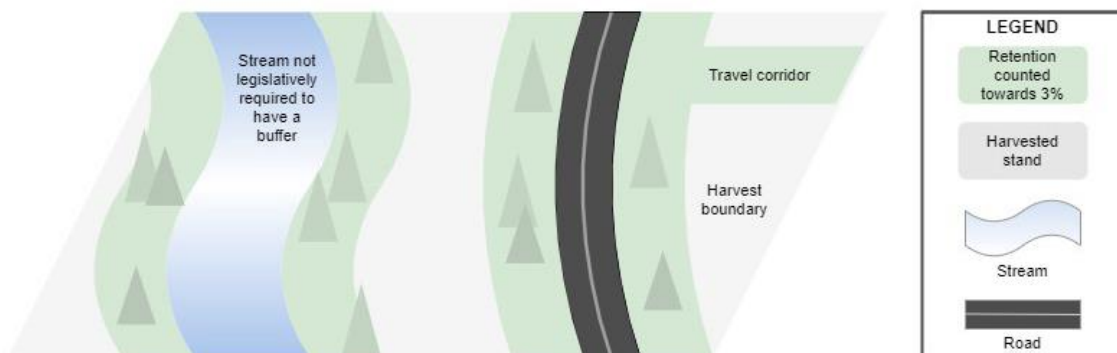
DEFINITIONS

The following definitions are applicable to this strategy:

- Harvest area: is the cutblock area with its unique ARIS opening number used for tracking all other forest management commitments;
- Structure retention includes both live and dead trees regardless of merchantability;
- Structure retention patches are removed for one rotation;
- Dispersed retention: individual trees or groups of trees less than 0.04 ha meeting the minimum timber utilization specifications which are left standing within the harvest area;
 - Where dispersed retention is left within harvest units, the area in hectares represented by this retention will be calculated as follows:
 - $\text{Area} = (\text{number of live trees/piece size}) / (\text{average volume per ha})$
 - where piece size = number of trees equaling 1 m³ net merchantable volume Eg. # live trees = 54, piece size = 3 trees /m³, average volume/ha = 180 m³/ha. Area = $(54 \text{ trees}/3 \text{ trees}/\text{m}^3) / (180\text{m}^3/\text{ha}) = 0.1 \text{ ha}$ of structure retention
- Patch retention: groups of unharvested trees greater than 0.04 ha in size (note this threshold value is open to revision)
- Peninsular retention patches with connectivity to the outer boundary of the harvest area should be similar to that of a stream buffer or other linear feature protection that has a longer length than the width of the patch.

GROUND RULES

- 4.2.4.1 This strategy shall apply to all timber disposition holders within the LSLRFMP area and will be applied by each operator to their respective harvest areas.
- 4.2.4.2 Structure retention shall consist of area containing non-harvested, representative timber stand types within the harvest area.
- 4.2.4.3 The combined area of dispersed clumps, islands and peninsulas retained within a harvest area, shall average a minimum of 3% merchantable area within harvest areas in a Forest Management Unit (FMU) by 5-year Stewardship reporting period.
 - 4.2.4.3.1 To facilitate operational planning and other regulatory requirements such as the creation and maintenance of safe work zones in proximity to operational roads etc., some individual harvest areas less than 12ha in size may have zero structure as long as the average of 3% is achieved across the landscape by FMU by the stewardship reporting period.
 - 4.2.4.3.2 There shall be structure retention, as defined above, for all harvest areas greater than 12 ha in size. Exceptions are likely to occur where the amount of structure retention will be less or not possible such as in old strip cuts or long narrow harvest openings where there is very little room to leave behind solid structure that can withstand windthrow. These exceptions will be described in the GDP.
- 4.2.4.4 Structure retention may be pre-planned, implemented during operations, or a combination of both methods may be used as appropriate.
- 4.2.4.5 Areas not harvested due to other values, such as historical resource sites, sensitive sites, or non-timber values, that could have otherwise been harvested within the approved SHS count towards meeting the structure retention targets.
 - 4.2.4.5.1 Any required buffers on unmapped streams that fall within the harvest area (i.e. a stream that has harvesting along either side) and are found during operational planning or harvest operations that formed part of the SHS counts as merchantable structure retention.
 - 4.2.4.5.2 Streams that may not legislatively require a buffer, but have additional merchantable buffers left operationally along them to protect sensitive soils or meet other objectives, shall count toward the structure retention targets.
 - 4.2.4.5.3 Buffers and other retained areas that are connected to the boundary of the harvest area count toward meeting the structure retention target and form an integral part of providing peninsulas for wildlife species for travel and hiding cover.
 - 4.2.4.5.4 Operational buffers on shallow open water or semi-permanent marsh will count fully towards retention targets if internal to the harvest opening.



- 4.2.4.6 All harvest areas are flown and interpreted for the final boundaries post-harvest. All structure retention areas shall be identified and classified during this process of interpretation within two years of harvest. These areas can be supplemented with knowledge collected during harvest operations to identify other key structure retention areas that may be missed during the interpretation of the final harvest area.
- 4.2.4.7 Other than dispersed retention; structure retention clumps, islands, or patches will have a minimum patch size of 0.04 ha with a variety of sizes utilized across the landscape depending upon the design and location of the harvest area.
 - 4.2.4.7.1 Where possible the location of the patches will be left so that blow down post-harvest is minimized. This could include patches with significant deciduous content on the exterior with conifer on the interior of the patch.
 - 4.2.4.7.2 Patches with significant understory content are a preferred option so that vertical structure remains following a blow down event.
- 4.2.4.8 All timber disposition holders shall report structure retention for their specific harvest areas to the FMA holder who will assemble and report the final results at the FMU level in the Stewardship Report.
 - 4.2.4.8.1 Structure retention reporting by each operator to the FMA holder is to be completed within 24 months of the harvest area skid clear date.
 - 4.2.4.8.2 All timber disposition holders shall submit their final as-built harvest openings within 2 years of harvest. The standards related to these submissions clearly outline what is to be submitted and includes the submission of polygons of structure retention.
 - 4.2.4.8.3 During the interpretation of these boundaries, the companies identify the retention patches remaining for submission to GOA and all stewardship reporting will be based on each companies' individual spatial files associated with this process.
- 4.2.4.9 In addition to the above rules, within S17 and S20, all birch trees over 18" DBH (diameter at breast height) shall be retained within harvest areas within the applicable compartments identified in the FMP (see Figure 7-6) and listed in Table 1 below. Patches (see definitions) of birch will be retained or avoided in locating roads or landings and dispersed (see definitions) birch will be retained or avoided except where incidental to road or landing construction or felled for safety concerns.

Table 1 Birch Retention Applicability- Compartment List

S17 Compartments	S20 Planning Units	
C13-P1	12	32
C13-P4	13	33
C14-P2	14	43
C22-P1	15	48
C16-P2	16	49
C20-P1	17	50
C22-P3	18	51
C25-P2	20	52
C26-P1	21	53
C26-P2	22	55
C26-P3	23	56
C26-P4	24	59
C26-P5	25	64
C27-P1	26	65
C27-P2	27	66
C28-P1	28	67
C28-P2	29	68
C30-P1	30	
C40-P1		

4.2.5 Species of Special Management Concern

Woodland Caribou

DISCUSSION

Annual Operating Plans within the Nipisi caribou Range are deferred for harvesting approval for all tenure holders as per Approval Condition 3.1 of LSL Regional FMP approval document until Subregional plans are developed as required by the, "Agreement for the Conservation and Recovery of the Woodland Caribou in Alberta (2020).

Harvest Timing Units (HTU) in Slave Lake and Red Earth Ranges were developed in conjunction with development of the FMP. HTUs define the areas for timber harvesting and reforestation activities in 10-year periods over 100 years.

GROUND RULES

- 4.2.5.1 Harvesting shall only occur in the 10yr period assigned to the HTU in approved SHS.
- 4.2.5.2 Areas not harvested during the 10 year HTU period in which they were planned will not be harvested until the next HTU entry.

Grizzly Bear Management Strategy

BEST MANAGEMENT PRACTICES

In all Grizzly Bear Watershed Units (GBWU):

- To promote faster growth of a vegetative screen, herbicide should not be applied within 15 metres of the right of way along DLO roads if the desired retention of overstory, standing trees is not possible. Consideration should be given to plant community types present as a proliferation of attractive forage (e.g. legumes, dandelions, fruiting shrubs) in absence of herbicide may lead to attraction of grizzly bears to the ROW.
- Utilize non-traditional silviculture access (helicopters) to facilitate timely reclamation of non-permanent AOP roads.

GROUND RULES

- 4.2.5.3 In Grizzly Bear Core Access Management Areas, temporary roads will be reclaimed within two years (see 2.14 of Provincial OGR for additional information regarding temporary road lifespan). Where this is not possible and an exception has been requested and approved, access management controls to impede on-highway vehicle access must be applied as per 2.8.1 of Provincial OGR. Access management could consist of physical barriers, berms, or a short section of rolled back road. The exceptions will be "non-standard" submissions beginning in the 2023 Timber Year.
- 4.2.5.4 Locate structure retention or retain non-merchantable timber and other vegetation along permanent roads to minimize sightability in harvest openings. Such structure retention would contribute to meeting targets as per 4.2.4.5 of Structure Retention section.

Moose Habitat Management Strategy

BEST MANAGEMENT PRACTICES

- Herbicide spraying along accessible permanent roads in coniferous stands should be avoided where possible to promote faster growth of a vegetative screen.

Barred Owl

BEST MANAGEMENT PRACTICES

Pending the development of localized barred owl tools to guide harvesting operations, all operators in the DFA will implement the following barred owl operational harvesting strategies where possible:

- Timing of the falling phase of harvest activities should aim to avoid high risk nesting and fledgling periods (March 14 to July 15).
- All harvest openings planned for harvest during the high risk nesting period of March 14 to July 15 should be assessed either on the ground or by utilizing the Migratory Bird Nesting Tool.
- Harvest openings scheduled for harvest between April 15 and May 15 in a medium or higher risk category will be assessed utilizing owl calls. If a response is received, a nest sweep will be conducted. When a nest is located, potential actions include:
 - Move to a harvest opening with a lower risk rating, or
 - Shift the timing of harvest, or
 - Reliance on the required (as per Provincial OGR) 100 m buffer, which will be also be used as part of the structure retention plan for the harvest opening.

Songbirds

BEST MANAGEMENT PRACTICES

To support viable populations of songbirds on the DFA, forest operators will implement the following operational strategies wherever possible:

- All harvest openings planned for harvest during the high risk nesting period of April 15 to July 15 should be assessed by utilizing the Migratory Bird Nesting Tool.
- Harvest openings scheduled for harvest between March 15 and April 15 in a medium or higher risk category should be further assessed. If a nest is located, one of the following actions should occur:
 - Move to a harvest opening with a lower risk rating, or
 - Shift the timing of harvest, or
 - Buffer the nest area with a 30m or greater buffer, which will be used as part of the structure retention plan for the harvest opening.

Other Species

GROUND RULES

- 4.2.5.5 Mineral licks with a drainage leading to them may be buffered with a 50 m buffer on the lick and a 20 m buffer on the drainage.

4.2.6 Soils

Provisions for reforestation of temporary roads, bared landing areas, and displaced soil created by timber harvesting operations shown in 5.5, 8.1.3 and Appendix 2-Reforestation Strategy Table in the 2021 FMP are adequate. Ground Rule 2.13.1 of 2022 Provincial OGR is, therefore, not applicable.

GROUND RULE

- 4.2.6.1 Temporary roads, landing areas with soil compaction utilized during operations in non-frozen conditions shall undergo soil decompaction in order to retain full stand productivity.

4.2.7 Aquatic And Riparian Area Protection

DISCUSSION

Arctic grayling is the sensitive cold-water fish species of concern in the DFA. In the absence of a fish specific model, the ECA model was applied to manage hydrologic risk across the DFA. This approach restricted the amount of harvesting disturbance in each watershed although it does not address fish requirements. In addition to harvesting limits in the SHS, expanded hydrologic buffers were developed along identified streams south of Lesser Slave Lake (refer to Section 3.4). SHS was excluded from these buffers. Many of these streams support cold water fish populations.

GROUND RULES

- 4.2.7.1 The Period 1 or 2 SHS scheduled in watershed LP 115, located in FMU S17, shall be deferred until:

- a) The ECA has recovered to less than 30 percent; or
- b) It is demonstrated to the department's satisfaction, that non-timber values are not being impacted with an ECA above 30 percent.

- 4.2.7.2 There shall be no harvesting within the S20 expanded hydrology buffers along Swan River (200m) and its identified tributaries (100m) as per Figure 7.3 in FMP.

4.2.8 Debris Management and Wildfire Protection

GROUND RULES

- 4.2.8.2 75% or more of the harvest areas will not receive treatments that reduce downed woody debris retained on site (e.g. brush raking, prescribed burns).

4.3 Monitoring and Reporting

GROUND RULE

- 4.3.1 Summary information submitted annually as per 3.1.4 of Provincial OGR must be in a format mutually agreed to by the companies and the Forest Areas.