



# Timber harvest planning and operating ground rules

Spray Lake Sawmills Ltd. (1980) and  
Crowsnest Forest Products Ltd.  
Forest Management Plan/Agreement  
Area Specific Addendum

The logo for the province of Alberta, featuring the word "Alberta" in a stylized, cursive script font.

Spray Lakes Sawmills (1980) Ltd and Crowsnest Forest Products. FMP Specific Addendum-  
Timber Harvest Planning And Operating Ground Rules 2024

2024

**Spray Lake Sawmills Ltd. (1980) FMA 0100038 and Crowsnest Forest Products Ltd. FMA2100047**

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

**Spray Lake Sawmills (1980)  
LTD.**

**ALBERTA  
FORESTRY AND PARKS**

**Crowsnest Forest Products  
LTD.**

ENDORSEMENTS

**The Spray Lake Sawmills (1980) and Crowsnest Forest Products Timber Harvest Planning and Operating Ground Rules, having been prepared in accordance with Section 16 (2) of FMA 0100038 and FMA2100047, and hereby endorsed this 23rd day of May, 2024. 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 C04 (Green Area), C02 (White Area), C01 (White Area), B01, B02 (White Area) and B12 (Green Area).**

Spray Lake Sawmills (1980) Ltd. and Crowsnest Forest Products Ltd

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

Original Signed

Original Signed

Per: \_\_\_\_\_

Per: \_\_\_\_\_

Tyler Steneker \_\_\_\_\_  
(Print name)

Ken Greenway \_\_\_\_\_  
(Print name)

Woodlands Manager \_\_\_\_\_  
(title)

Executive Director \_\_\_\_\_  
(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 Submission Dates**

#### **GROUND RULES**

- 4.1.1.1 The AOP submission date is April 1 of each year unless otherwise approved by Alberta.
- 4.1.1.2 The reforestation program shall be submitted by April 1 or as otherwise specified in an FMA, or at a time agreed to by Alberta.

### **4.1.2 General Development Plan (GDP)**

#### **GROUND RULES**

- 4.1.2.1 The company and Alberta shall meet prior to layout of the area identified in the GDP to clarify issues such as: reviewing license boundary in relation to CTP program, public interest in the area, new resource data, and any other factors that could affect harvest planning and scheduling. The intent is to identify known sites of specific interests, e.g. mineral lick, CLR clearance, unique habitat feature, known designated recreation infrastructure and to proactively mitigate impacts on them. This is not to be used for re-evaluating or amending the SHS or FMP objectives.
- 4.1.2.2 Planned harvest areas exceeding 80 ha in C05 FMU shall be submitted as a non-standard submission. Section 4.2.4 outlines requirements for structure retention in these larger harvest areas.
- 4.1.2.3 For the C5 FMU, where additional non SHS harvest areas are added adjacent to existing harvest areas, the total of the two harvest areas cannot exceed the maximum harvest area size specified in the FMP. When the existing harvest area regeneration reaches 30 years of age for C05 FMU, this no longer applies.

### **4.1.3 Annual Operating Plan (AOP)**

#### **GROUND RULES**

- 4.1.3.1 Any temporary roads planned which cross rough fescue native grasslands found during layout in C05 FMU or within in the Rough Fescue Crown Land Reservations (old PNT 0900084 to 0900088) shall be submitted as a non-standard submission.

## **4.2 Operational Ground Rules**

### **4.2.1 Harvest Area Design**

#### **Meadows**

##### **C05 DISCUSSION**

Meadows are defined on Alberta Vegetation Inventory (AVI) as HF (herbaceous - forbs), HG (herbaceous - grassland), SC (shrub closed) or SO (shrub open). The objective is to leave useable wildlife hiding/thermal cover adjacent to the meadow.

##### **C05 FMU BEST MANAGEMENT PRACTICE**

- Structure retention should be used to maintain mature forest along portions of these meadows to provide variable habitat.

##### **C05 GROUND RULE**

- 4.2.1.1 For meadows greater than 5 ha in size, at least 50% of the meadow's lineal edge shall have unharvested leave stands of at least 50 m wide. The unharvested leave stands may be in one continuous patch or in multiple smaller patches that together equal at least 50% of the perimeter. To achieve this, all deciduous shall be left and coniferous shall be deferred until the regeneration bordering the remainder of the meadow is 3 m tall.

#### **Uncommon Plant Communities**

##### **C05 FMU and B12 FMU BEST MANAGEMENT PRACTICES**

- Alberta Conservation Information Management System (ACIMS) and other available rare eco-site data should be referenced during development of the GDP;

##### **C05 FMU and B12 FMU GROUND RULE**

- 4.2.1.2 When uncommon plant communities are field verified, they shall be maintained.

## 4.2.2 Visual Impacts

### PURPOSE

To manage the visual impact of timber operations on the forest landscape.

### DISCUSSION

The objective is to mitigate the impact of timber operations on the visual quality of the forest landscape by identifying the location of forest landscapes and other areas of high visual and scenic value and setting objectives for their management and by addressing visual quality issues in the FMP. Chapter 7 Section 4.9.2 and Page 84 of Appendix II provide details on the high sensitivity visual quality inventory process

### GROUND RULE

- 4.2.2.1 The potential visual impact of harvesting and reforestation activities within harvest areas containing 'high foreground' sensitivity as determined in the FMP process or areas of 'high mid-ground' and 'high background' sensitivity deemed visually sensitive after re-designation through operational planning and/or public consultation shall be considered during harvest planning and operations. Visual management practices shall be incorporated into the ~~FHP~~ GDP to temper adverse visual impacts. This mitigation will include one or more of:
- a) modification of harvest boundaries
  - b) utilization of topography
  - c) application of various structure retention approaches
  - d) modification of road locations
  - e) use of visualization computer modeling to evaluate various layout options.



## 4.2.3 Structure Retention

### B12 FMU STRUCTURE RETENTION

#### DISCUSSION

Structure retention targets will be achieved using the following objectives:

1. Safety is a primary concern when leaving structure retention standing in a harvest area.
2. Structure retention will include pre-harvest layout and or contractor selected.
3. Candidates for structure retention include merchantable and non-merchantable trees representative of the pre-harvest stand:
  - a. Green culls (rotten, broken tops, forked tops, dry sides, severe sweep and crook);
  - b. Snags (as safety permits);
  - c. Wolf trees (with heavy branching or poor form);
  - d. Deciduous trees and patches;
  - e. Sub-merchantable trees;
  - f. Advanced regeneration;
  - g. Whitebark pine, Limber pine and Alpine larch;
  - h. Tree patches within inoperable areas (inoperable areas cannot be reasonably operated due to environment and safety considerations such as rock outcrops, steep slopes, wet areas etc.);
  - i. Tree patches for source water areas, such as springs and ground water seepage areas, ephemeral or intermittent watercourses (can be considered peninsular patch);
  - j. Tree patches for cultural sites (e.g. cultural artifacts);
  - k. Tree patches for sensitive sites (e.g. bird nests, dens, concentrated grizzly rub trees, hibernacula, mineral licks);
  - l. Tree patches to screen important recreational view sheds;
  - m. Tree patches along permanent public roads (DLOs, LOCs, and numbered highways) to screen within block grizzly bear habitat or visual resources (see visual quality strategy for details); and
4. Deciduous areas, areas with higher moisture content, areas of non-merchantable size and/or dead standing trees, or trees that appear to have survived multiple fire cycles are good examples of candidate structure retention.
5. Single stem retention is allowed provided an estimate of retention area is completed on the harvest area (see definition below). In the absence of natural or safe snags, as safety permits, top 2 to 6 green culls or dead trees per hectare, preferably 30 cm or greater DBH to 2-5 m tall.
6. The primary means of identifying structure retention levels will be through following the Spatial Data Directive, Final Cutblock Policy which depend on the *Disturbance Updates - Standards and Specifications for Timber Harvesting (2015)*. Other means may be determined by Alberta. Minimum polygon size for leave areas (retention) has been dropped from 0.5 ha in the standard to 0.04 ha.

## DEFINITIONS

- Retention – Standing trees left after harvest (live and dead).
- Single Stem Retention – Individual trees left standing in a harvest area.

The following formula can be used to determine the equivalent area:

$Area = (Number\ of\ standing\ trees \div Block\ Predicted\ Piece\ Size)$

$\div Average\ gross\ volume\ per\ ha$

e.g. if there are 100 live cull trees left behind, and the predicted piece size for the block was 3.7 trees/m<sup>3</sup>, and the average gross volume was 180 m<sup>3</sup>/ha, then:

$$(100\ trees \div 3.7\ trees/m^3) \div 180\ m^3/ha = 0.15\ ha$$

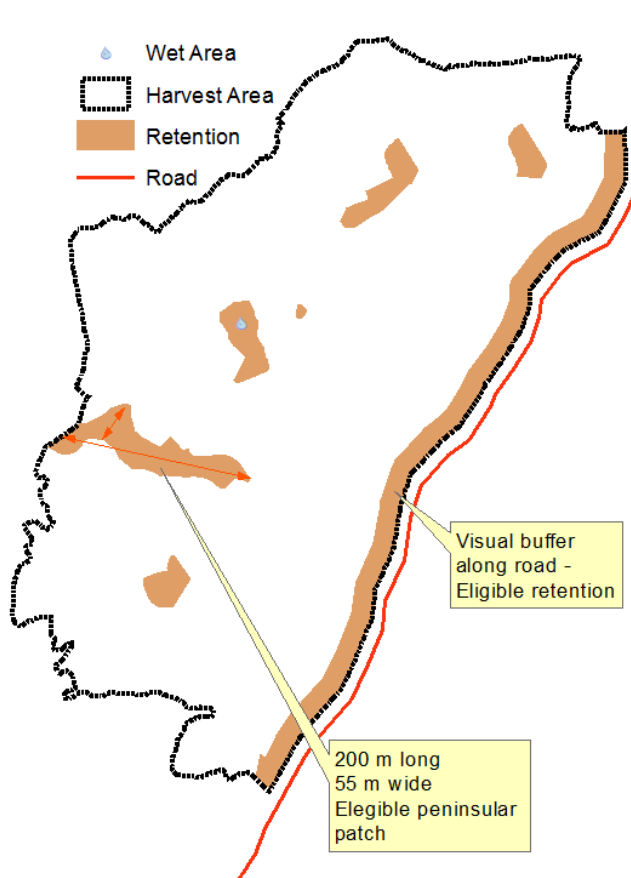
- Interior Patches, Clumps, Islands – un-harvested groups of trees detached from the harvest boundary.
- Peninsular patch- un-harvested groups of trees protruding into the harvest area and attached to the harvest boundary. Peninsular patches can contribute to the retention target if the unharvested area has a 3:1, length to width ratio.
- Matrix Remnants- undisturbed trees and groups of trees both detached and attached from the disturbance event. Undisturbed means the retention is intact and left standing and are outside of the block. These areas are functional landscape retention however they do not count toward the 3% target as they are connected to but outside of a harvest area.

## GROUND RULES

- 4.2.3.1 All tenure holders' operations within the B12 FMU will plan and carry out operations to achieve an interior harvest area, structure retention target of 3% for harvest areas as specified below. A harvest area is defined as one opening with a corresponding opening number. The 3% structure retention requirement has been applied to the timber supply analysis.
- 4.2.3.2 Structure retention shall be internal to each harvest area, be representative of the pre-harvest stand composition and reported annually as a component of the Final Cutblock Digital Data Submission Spatial Data Directive requirement and in the 5-year Stewardship Reports.
- 4.2.3.3 On an individual harvest unit basis (i.e., opening number), peninsular patches can only contribute up to two thirds of the target (i.e., 2%).
- 4.2.3.4 Harvest areas larger than 10 ha in size shall have at least 3% area of structure retention as per 4.2.3.1, 4.2.3.2 and 4.2.3.3. Harvest area smaller than 10 ha in size may have less than 3% area of structure retention (including as low as 0%), due to operational realities (i.e. long narrow blocks).
- 4.2.3.5 The minimum target is 3% of the harvest area annually, but a wide range in variability in harvest area retention levels as long as 4.2.3.4 is met and the annual target is achieved or exceeded.
- 4.2.3.6 Structure retention is measured on an area basis. The 3% of the area target shall be achieved and reported by all tenure holders in B12 FMU as the amount of area harvested and the area left for structure retention for inclusion of the DFA level results in the 5-year Stewardship Report. Annual and landscape variation of retention are permitted, provided the 5-year target is achieved (refer to VOIT #10, 1.1.2.1a).
- 4.2.3.7 To be consistent with spatial data directive reporting requirements and cutover photography acquisition and interpretation, retention levels will be tracked annually, but be calculated by the end of the timber year, two years after the skid clearance date.

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4.2.3.8 The spatially identified structure retention will be removed from the contributing landbase for the next FMP for the length of one rotation (typically 80 years).



**Figure 1:** Example of structure retention

## C05 FMU STRUCTURE RETENTION

### DISCUSSION

The following principles will guide implementation of stand level procedures:

- Some form of vertical and horizontal structure will be retained in most harvested areas.
- It is acknowledged that amounts will vary within individual blocks with greater amounts of retention as harvest block size increases.
- Sensitive sites shall be protected.
- Opportunities for both current and short-term wildlife habitat purposes shall be enhanced.
- Loss of nutrients from the forest ecosystem shall be minimized.

Components of Stand Level Retention

- single-tree, small clump (less than 0.01 ha) retention;
- large clump (0.01 or greater up to 15 ha) retention;
- snag retention;
- unique site retention.

Strategies for Single Green Tree and Small Clump Retention

Single green tree retention is defined as single trees or groupings of up to five trees left standing in a harvest area. Small clump retention is defined as small groups of trees covering an area less than 0.01 ha in size, growing together, that are left standing undisturbed in the harvest area.

Good choices for single-tree retention include:

- dying trees that are safe to leave;
- subalpine fir and larch, Douglas fir and all deciduous species;
- wolf trees or trees with heavy branching or poor form;
- wildlife trees (e.g., with nests, cavities);
- single trees located in sensitive sites;
- all Limber pine and Whitebark pine encountered.

Strategies for Large Clump Retention

Large clump retention is defined as a group of trees that are left standing in the harvest block, and which take up greater than 0.01 ha (100 m<sup>2</sup>) of the area of a harvest block. The shape of clump retentions may vary widely.

Trees to consider for retention in large clumps include:

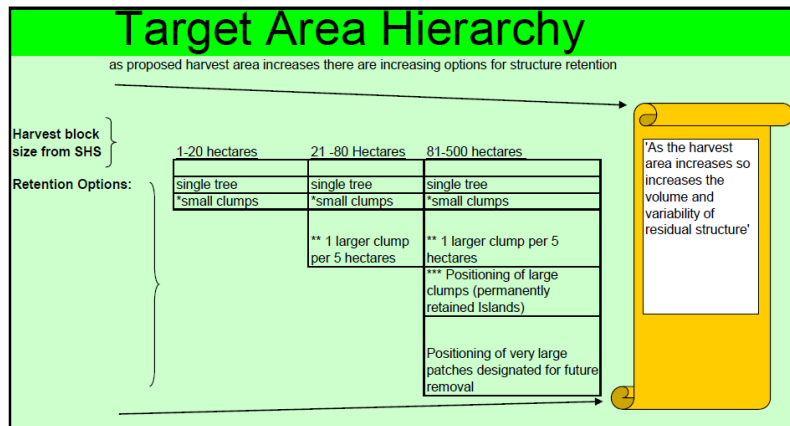
- understory trees that also contain mature merchantable and/or non-merchantable trees;
- merchantable conifer that are windfirm;
- areas containing shrubs, understory or unique sites;
- located around groupings of snags, wolf trees or wildlife trees;
- wet areas (i.e., ephemeral creeks, watersource areas, etc.) within the harvest block;
- inoperable areas within the harvest block (e.g., steep slopes pitches, sensitive soils).

General Strategies for Structure Retention

- Retention of clumps (small and large) is preferable to single trees. See FMU C05 table below.
- Stand retention will comprise merchantable stems representing all diameter classes found in the proposed harvest block, as well as non-merchantable standing and downed trees.
- Merchantable trees will be left based on site-specific objectives and general stand strata.

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- Retention clumps will vary in size and shape, generally ranging from individual trees to clumps that are several hectares in size. The distribution patterns and size will depend on conditions in each block.
- Try to locate some larger retention clumps within 30-50 m from the edge of the harvest block to allow ease of access for wildlife (e.g. Grizzly Bears).
- Clump placements should represent the variety of topography found in harvest blocks (i.e., clumps need to be placed on flat ground as well as steep terrain).



\* Small clumps are groups of trees taking up an area of less than 0.01 hectares (i.e. 100m<sup>2</sup>) and large clumps are groups of trees taking up an area of greater than 0.01 hectares.

\*\* Large clumps can be located in blocks smaller than 21 hectares recognizing that variability within a range is desired.

\*\*\* Large clumps can be positioned together to form permanently retained islands. This combining of clumps process also can apply to harvest blocks smaller than 80 hectares based on local circumstance and the discretion of the forestry practitioner.

Pure, even-aged, conifer stands present fewer opportunities for leaving structure; however, retention will be designed such that some will be available for harvest in future passes during the rotation period. Blocks larger than 100 ha may be planned to have more than 5% retention where a strategy to return 30-90 years for C05. Where these stands can be left with minimal volume loss, they should be retained for a minimum of 60 years for C05 to provide mature habitat within a large harvest area. Upon final removal of these retention patches, the target is still to retain 3% in C05 of the standing merchantable trees over the rotation.

### Strategies for Snag Retention

Snags are defined as a standing dead tree within the harvested area. The objective is to leave all snags standing recognizing safety considerations. Retention of full height snags within protected clumps is preferred; however, where safety is an issue, and snags are desired, live trees may be "safely topped off" around 6 m to create snags, bird perches and potential cavity nests. The primary target size for topped off trees is in tree diameter classes greater than 35 cm when measured at breast height. Safety is the first priority in determining whether a dead or dying snag should remain standing within a block.

### Strategies for protection of Unique Ecological Sites in C05

Unique ecological sites are defined as sites that contain natural features of special value for wildlife and plant species and may include the following:

- Small clumps of old forest remnants from previous fires or old logging, clusters of large-diameter downed logs, small bogs and wetlands, wildlife trees, treed rocky outcrops, sites immediately surrounding dens, hibernacula, mineral licks, Whitebark or Limber pine.

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Every effort should be made to identify all unique sites during planning and layout.

#### Strategies for Retention in Pine Focus Blocks Associated With Mountain Pine Beetle

As a priority, structure retention shall focus on non-pine species.

### **C05 FMU GROUND RULES**

- 4.2.3.9 The operator shall retain an average of 3% structure retention by landscape management unit with allowable variance from 0 – 5%.
- 4.2.3.10 Blocks with more than 5% retention may include a strategy to return 30-90 years later for the larger patches.
- 4.2.3.11 For harvest blocks over 20 ha in size, an average of 1 small clump per hectare and at least 1 additional large retention clump for every 5 ha harvested shall be retained.
- 4.2.3.12 For stands in the Porcupine Hills, structure retention shall be in accordance with the Porcupine Hills Harvesting and Silviculture Strategies: Minimizing the Risk to Successful Regeneration of Cutovers January 2005. (FMB Document).
- 4.2.3.13 In pure pine types the following applies:
  - a) retain Douglas fir, Whitebark pine, Limber pine, Alpine fir, Alpine larch or any other species found as single trees or as clumps;
  - b) retain spruce where sheltered or protected in clumps by other species;
  - c) remove those merchantable spruce stems standing greater than 9 m in height that are not found within protected clumps;
  - d) retain all deciduous species;
  - e) pine as required to meet requirements.
- 4.2.3.14 Retention clumps will vary in size and shape, generally ranging from individual trees to clumps that are several hectares in size.
- 4.2.3.15 Forest operators shall retain snags in the following manner:
  - a) retention of full height snags is a priority;
  - b) leaning snags or trees of non-merchantable species that are greater than 6 m in height that create a safety hazard may be felled to create safe working conditions;
  - c) snags within 40 m of roads, camps, landings, fence lines, power lines and machine maintenance areas may be felled to create safe working conditions.
- 4.2.3.16 The following are guidelines for the spatial distribution of structure:
  - a) retain structure near woody debris piles (and vice versa);
  - b) retain structure near the harvest area boundary to create a gradual ecotone between the harvest area and un-harvested forest;
  - c) retain structure in patterns and locations that minimize the potential for blowdown;
  - d) retain structure near ephemeral draws and intermittent streams.
  - e) retain structure around known wildlife features e.g., bear dens, clumps of bear rub trees etc.

## 4.2.4 Species of Special Management Concern

### Grizzly Bear

#### DISCUSSION

The Grizzly Bear Recovery Plan has been approved by Alberta. Strategies from the recovery plan have been implemented provincially through Fish and Wildlife with respect to BearSmart principles. Access management strategies continue to be worked on at the provincial level Planning

In core and secondary areas, temporary roads used for timber operations are not considered to be open routes if harvest is during the winter months and if effective access control is used during non-frozen conditions. (see 4.2.11 of Addendum and 2.16 of Provincial OGR)

#### BEST MANAGEMENT PRACTICES

- Pursuit of joint Road Use Agreements with energy sector companies and other forest users to reduce the overall access footprint;
- Reduction harvest block parallel road sightlines for permanently open roads;
- Reclamation of unused access.

### Key Wildlife and Biodiversity Zone

#### BEST MANAGEMENT PRACTICES

- Agreed upon critical winter ungulate habitat in the B12 FMU (see 4.1.2.1) should have:
  - a) Non-forested areas (AVI veg classes HG, HF, SC and SO) require adjacent hiding/thermal cover to maintain their effectiveness.
  - b) maximize retention near these critical winter ranges where possible;
  - c) see 4.1.2 for further requirements for C05 FMU.
- Temporary roads should be re-contoured and reclaimed (and potentially reforested) within 18 months of completion of harvesting and hauling operations, unless otherwise agreed to in the operating schedule.
- The amount, tenure and class of new access roads should be minimized and consistent with the land use objectives in regionally defined key wildlife zones. Access development will strive to minimize new human infrastructure.
- Mechanical thinning and selective use of herbicides as approved by Alberta may occur within this zone.
- Existing lesser vegetation, or where agreed to, treed buffers comprising the visual screening along permanent roads bordering shrub meadows should be maintained to limit line of sight across meadows.
- The following silviculture and access roading requirements should be met:
  - a) where possible, reforestation treatments should be planned as soon after harvest as possible;
  - b) while considering safety, position bends in the roads at junctions to minimize line of sight.

## GROUND RULES

- 4.2.4.1 Star Creek shall be managed in a shelterwood/partial cut regime to ensure other values are recognized and elk habitat is favored (part of an FM activity in objective 30 of C05 FMP)
- 4.2.4.2 Timber harvesting shall be managed to provide hiding cover for wildlife and facilitate wildlife movement in the following corridors:
  - a) within a strip 1,600 m (1 legal mile) in width bordering the Rocky Mountain Forest Reserve boundary within the Crowsnest Corridor;
  - b) along the Highway 22 corridor—where the highway bisects the Rocky Mountains Forest Reserve.

## Fine Filter and other Species

### DISCUSSION

Additional habitats of selected wildlife species require maintenance of undisturbed habitats (e.g., breeding or denning locations). These species require specific sites in order to complete all or part of their life cycles.

Pure strain West slope Cutthroat Trout has been listed under the federal *Species at Risk Act* and provincially under Alberta's *Wildlife Act* Regulations as a threatened species.

Southern Headwaters At Risk Project, (SHARP) identifies a number of focal species whose spatial and compositional requirements for habitat are most representative of those of a large number of species. This focus ensures their persistence and that of multiple species at risk in the southern headwaters area.

SHARP species that are found in or near the C05 FMU include: Wolverine, Harlequin Duck, Long-toed Salamander, Western Toad, Pileated Woodpecker and Clark's Nutcracker.

### Wolverine:

#### C05 FMU GROUND RULES

- 4.2.4.3 No timber harvesting shall occur in or near cirque basins, talus slopes, boulder fields, and avalanche paths in the sub-alpine forest. A minimum 60 m treed buffer shall be left where harvesting occurs near these areas.
- 4.2.4.4 Leave downed trees and wood debris in identified wolverine habitat.



## Harlequin Duck

### C05 FMU GROUND RULE

- 4.2.4.5 Seventy-one ha of identified Harlequin Duck nesting areas have been removed from the net harvestable landbase to ensure protection of this habitat. Harvest planning along the Livingstone River should consult with the TSA theme map for Harlequin Ducks. Maintenance of ground rule buffers on the remainder of the watercourses will protect habitat for this species. (See Alberta Species at Risk Report #105)

### Pileated Woodpecker:

Potential cavity trees include dead trees more than seven meters tall with broken trunks or live trees where decay has softened the wood. Decay is strongly associated with the presence of conks, dead branches, branch stubs, trunk cracks, and swelling.

### C05 FMU GROUND RULES

- 4.2.4.6 Retain all current as well as some future cavity trees
- 4.2.4.7 Retain large (greater than 30 cm) live or dead deciduous or dead coniferous trees where deciduous is absent, that have rectangular nesting holes on the trunk.

### Clark's Nutcracker:

#### C05 FMU GROUND RULE

- 4.2.4.8 Where Clark's Nutcrackers are found, the company shall leave scattered conifers on the outskirts of openings, preferably on south-facing slopes and on sites protected from the wind.

## Whitebark and Limber Pine

Whitebark and Limber Pine are widespread throughout the C05 FMU and also present, but much less prevalent, in B12 FMU. Whitebark and Limber pine are in decline throughout Alberta due to an alien invasive fungus, white pine blister rust. In addition, both species are under threat from MPB and long-standing fire suppression that has affected successional processes. Both species are listed as "Endangered" under Alberta's Wildlife Act and a provincial recovery strategy has been created.

### C05 FMU GROUND RULE

- 4.2.4.9 Whitebark pine and limber pine conservation targets identified in Forest Management Plan shall be met through GDP and AOP planning and operational avoidance.

### B12 FMU BEST MANAGEMENT PRACTICES

- Protect and retain mature, healthy individuals and small groups as encountered during harvest operations that fall outside of spatially identified protective retention areas.

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## **B12 FMU GROUND RULES**

- 4.2.4.10 Establish spatially identified protective retention areas on the ground, as most Whitebark pine and Limber pine tend to grow along ridge tops and rock outcrops.
- 4.2.4.11 Identify protective retention areas within the AOP (as supplemental information).

## **Barred Owl**

### **BEST MANAGEMENT PRACTICES**

- Avoid the harvest of aspen and poplar trees;
- From March 14 to July 15, harvest operations within 500m of known nesting sites should be avoided.
- Adhere to the structure retention strategy

## **Songbirds**

### **BEST MANAGEMENT PRACTICES**

In order to reduce any potential impacts to Varied Thrush populations, timber disposition holders will:

- Adhere to the structure retention strategy
- Minimize temporary road densities

## 4.2.5 Recreation

### PURPOSE

To manage the implications of forest management activities on forest recreation values and experiences.

### DISCUSSION

Potential exists for increased public awareness and for increased recreational opportunities through co-ordination with forest management practices. Alberta and the company may explore opportunities to improve or relocate existing trails through normal timber operations.

Within C05 FMU, some areas adjacent to designated random recreation sites have not been included in the net landbase and therefore are not part of the SHS.

Many methods of engaging the public during the forest planning process are used by forest operators.

### GROUND RULES

- 4.2.5.1 Operational tactics that integrate (where reasonable) designated recreation infrastructure and tourism shall be described in the GDP. This may include reclamation/restoration of non-designated trails.
- 4.2.5.2 The forest operator shall work with Alberta and local stakeholder groups to address concerns that have been identified. When requested, the company shall provide a summary of stakeholder contact.
- 4.2.5.3 The Operators shall restore designated trails and their associated watercourse crossings that are affected by their operations. Acceptable restoration involves bringing the site back to the condition it was in prior to industrial use.
  - 4.2.5.3.1 If the designated trails were approved for access under an AOP, then erosion control and deactivation methods as per 2.15 of Provincial OGR will need to be considered.

## 4.2.6 Grazing and Timber Integration

### GROUND RULES

- 4.2.6.1 Natural meadows and other non-forested rangeland areas > .4 ha not identified by AVI but discovered during operations, shall be treated according to 2.10.1 of Provincial OGR and External Information Letter 2010-02 Fescue Grassland Information Letter – Principles for Minimizing Surface Disturbance.
- 4.2.6.2 The company shall not perform any silviculture treatments on natural meadows and other non-forested rangeland areas occurring within cutblocks.
- 4.2.6.3 The company shall not deck timber within natural meadows or other non-forested rangeland areas unless specific locations are identified and addressed in the GTA.

## 4.2.7 Soils

### DISCUSSION

Timber disposition holders should conduct forest harvesting and site preparation operations during frozen or dry ground conditions. Avoidance of wet conditions reduces the risk of compaction and rutting from equipment. In-block roads and landings are subjected to repeated machine traffic and are more likely to be compacted compared to other areas of the harvest block.

Provisions for reforestation of temporary roads, bared landing areas, and displaced soil created by timber harvesting operations shown in section 7.1.2 and Table 5-2- Silviculture Matrix of the 2018 B12 FMP are adequate. Ground Rule 2.13.1 of Provincial OGR is, therefore, not applicable within FMA0100038 (FMU B12).

C05 FMP does not include such provisions, therefore 2.13.1 of the provincial OGR is applicable.

### GROUND RULE

- 4.2.7.1 Temporary in-block (harvest) roads and landing areas with soil compaction shall undergo soil decompaction in order to retain full stand productivity and enable reforestation.

## 4.2.8 Road Classification, Planning and Design

### GROUND RULES

Temporary Roads:

- 4.2.8.1 Proposed loop roads will be submitted as non-standard in the GDP.

## 4.2.9 Road Construction, Maintenance and Reclamation

### GROUND RULE

- 4.2.9.1 Unless otherwise approved by Alberta, roads and landings shall avoid:
  - a) Rough Fescue native grassland; and
  - b) natural meadows.

## 4.2.10 Access Management

### GROUND RULE

- 4.2.10.1 To address agreed upon critical habitat (e.g., elk calving grounds) conditions of approval for AOP roads will address access control, signage, road closure and any public notification requirements.
- 4.2.10.2 In a Public Land Use Zone (PLUZ) new access roads must be integrated with PLUZ road networks.
- 4.2.10.3 After hauling is complete, initial access points shall have physical barriers and signage to discourage use by on highway vehicles. These would be put up by the company with monitoring as agreed to with Alberta. The signage is provided by Alberta.

## 4.2.11 Aquatic And Riparian Area Protection

### GROUND RULES

- 4.2.11.1 Channels on slopes greater than 20% which only flow during runoff events shall be protected as intermittent watercourses as per Table 6 in Provincial OGR.
- 4.2.11.2 Applicable to B12 FMU only: Equivalent Clearcut Area (ECA) analysis shall be recalculated during GDP development for any watersheds having the potential to exceed 30% ECA from of the SHS as determined in the FMP development process.
  - 4.2.11.2.1 The resulting ECA shall not exceed 50% (high risk).
  - 4.2.11.2.2 For any watershed expected to be 31-49% ECA, the harvest openings within the watershed shall be submitted as non-standard in the GDP.
  - 4.2.11.2.3 If the watershed is still between 31-49% at AOP submission, the harvest openings in that watershed shall be submitted as non-standard in the AOP regardless of GDP approval. Additionally, an assessment by a qualified professionals (third party) to adequately determine risk and potential mitigation options will be submitted with the AOP. The supplemental information shall include the results of the analysis, the qualified professional assessment and the mitigative options proposed for the watershed and/or compartment. The mitigative options proposed will be evaluated by the department.
- 4.2.11.3 Watercourse classifications shall be as per 2.17- Table 4 of Provincial OGR. Any harvest openings laid out prior to November 1, 2023, may be harvested as per the 2022 Specific Addendum. Openings laid out after that date shall be laid out and/or harvested as per the 2024 Specific Addendum.

## 4.2.12 Debris Management and Wildfire Protection

### C05 FMU Only

#### DISCUSSION

Coarse woody debris (CWD) is defined as wood (logs or pieces) lying at an angle of less than 45 degrees from the ground and with a diameter greater than 7.5 cm. It includes the following:

- clusters of large-diameter downed logs;
- naturally occurring, non-merchantable downed logs scattered through the harvest area;
- small, unburned brush piles;
- single green trees that are dying and/or snags subject to blowdown (ultimately becoming CWD);
- other slash.

#### C05 FMU GROUND RULE

- 4.2.12.1 No wildlife piles are allowed within the 10 km zone of FireSmart plans and Crowsnest Community Zone plan. Strategies for retention/recruitment for CWD outside the 10 km FireSmart zones that should be considered include:
- a) windthrown trees contribute to CWD; therefore, not all windthrow areas have to be salvaged;
  - b) single tree retention for future recruitment of large piece sizes;
  - c) stump-side processing, tree tops and breakage;
  - d) hazard trees that have to be cut down, should be retained on site;
  - e) piles should contain coarse wood (log diameter greater than 7.5 cm) and limbs.