



Timber harvest planning and operating ground rules

Forest Management Unit (FMU) F23
Area-Specific Addendum



2023

F23 Forest Management Unit

**FOREST MANAGEMENT UNIT (FMU) F23 SPECIFIC
ADDENDUM-TIMBER HARVEST PLANNING AND OPERATING
GROUND RULES**

**ALBERTA
FORESTRY, PARKS AND
TOURISM**

ENDORSEMENTS

The Forest Management Unit (FMU) F23 Operating Ground Rules, having been prepared in accordance with Section 98 (2) of the Timber Management Regulation and hereby endorsed this 11th day of April, 2023.

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

Original Signed

Per:

Ken Greenway

(print name)

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

GROUND RULES

- 4.1.1 The GDP submission date is June 1 of each year unless otherwise approved by Alberta.
- 4.1.2 The AOP submission date is on or before June 15 for summer operations and on or before September 15 for winter operations unless otherwise approved by Alberta.
- 4.1.3 The reforestation program shall be submitted:
 - a) before April 1 for silviculture operations commencing between May 1 and October 31; or
 - b) before September 15 for silviculture operations commencing between November 1 and April 30.

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 DLO roads. Targets for the limits of sight distance shall be 400 m,
- 4.2.1.2 Roadside vegetation shall be protected in harvest areas to limit the line-of-sight distance across the harvest area. To minimize breaks in the vegetation screen, only one road entry point shall be allowed into the harvest area.

4.2.2 Structure Retention

GROUND RULES

- 4.2.2.1 Residual structure shall be retained in harvest areas during harvest and silviculture operations (including salvage operations) according to the FMP regarding the amount of structure, size of patches, species, composition, and distribution. In the absence of direction in the FMP, the following standards apply.
- 4.2.2.2 Volume targets for structure retention will vary by harvest area. A target of 2% merchantable coniferous volume and 2% merchantable deciduous volume will be retained within harvest areas across the overall landscape of FMU F23.
 - 4.2.2.2.1 Any patches identified as retention shall not be harvested until the next rotation.
 - 4.2.2.2.2 Retention shall be within the harvest block boundary, except where approved by Alberta.
- 4.2.2.3 Retention contributing to the target in 4.2.4.2 can only be from the net landbase (e.g. retention from buffers on watercourses or steep slopes do not contribute).
 - 4.2.2.3.1 Operational buffers on shallow open water or semi-permanent marsh will count fully towards retention targets if internal to the harvest opening.
- 4.2.2.4 The following table is the average number of patches of residual structure that shall be left within harvest areas. There may be zero patches of residual structure in any particular harvest area as long as there is compensation in other harvest areas to meet the FMU average. These guidelines are based

on maintaining 2% of the volume within harvest areas for SHS Period 1 (2004-2009) across the FMU. The required average number of patches per harvest area is based on the average block size, distribution of blocks in the harvest area size classes and maintaining the residual structure over the landscape FMU F23.

Table of area residual structure

Harvest Area Size	Patch Type / Size	Average Number of Patches / Harvest Area
2 - 20 ha	Small < 0.2 ha	Small = 0.8
	Large 0.2 - 2.0 ha	Large = 0.0
20 - 60 ha	Small < 0.2 ha	Small = 2.2
	Large 0.2 - 2.0 ha	Large = 0.4
60 - 100 ha	Small < 0.2 ha	Small = 3.7
	Large 0.2 - 2.0 ha	Large = 1.1
> 100 ha	Small < 0.2 ha	Small = 8.1
	Large 0.2 - 2.0 ha	Large = 2.0

4.2.2.5 Timber disposition holders shall retain structure in the following manner:

- a) leave larger patches rather than multiple smaller patches;
- b) leave individual stems of residual structure throughout harvested areas, as available;
- c) leave as many individual stems of non-merchantable trees, shrubs and snags as operationally and silviculturally feasible:
 - i. 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,
 - ii. snags within 40 m of roads, camps, landings, fence lines, power lines and machine maintenance areas may be felled to create safe working conditions.

4.2.2.6 The following are guidelines for the spatial distribution of residual structure:

- a) retain residual structure near woody debris piles (and vice versa);
- b) retain residual structure near the harvest area boundary to create a gradual ecotone between the harvest area and un-harvested forest;
- c) retain residual structure in patterns and locations that minimize the potential for blowdown;
- d) retain residual structure near ephemeral draws and intermittent streams;
- e) retain residual structure within inoperable areas whenever possible;
- f) retain merchantable retention along intermittent draws within the machine free zones.

4.2.2.7 As per 2.4 of Provincial OGR, timber disposition holders may create stubs anywhere within the harvested area to supplement snag densities, aid in wind-firmness of residual patches or for use as rub posts.

4.2.2.8 The following are guidelines for the retention of residual structure:

- a) Retained structure contributing to the target merchantable volumes, can include merchantable volume within understory avoidance patches, pure merchantable areas, single merchantable stems and areas within salvaged burns.
- b) Residual material, where it exists on the landscape, may also be retained and can include non-merchantable areas, non-merchantable volume within understory avoidance patches, lesser vegetation, standing dead, broken, decaying trees, trees identified as having dens or nests, viable understory, or other unique flora and/or terrain features.

- c) When establishing priority areas for patch retention and/or merchantable retention within a compartment, planners will consider 4.2.2.5 and the following:
 - i. proximity to existing water buffers;
 - ii. wildlife zones and wildlife habitat objectives;
 - iii. harvest area size (emphasis in harvest areas which exceed 100 ha in size);
 - iv. line of sight and distance to hiding cover objectives;
 - v. within areas where multiple canopy layers and a range of tree sizes and species exists;
and
 - vi. in planning the distribution of the patches of residual structure left within harvest areas, the guidelines in 4.2.2.6 will be used.
- 4.2.2.9 The timber disposition holder shall annually report on structure retention results by FMU in the GDP or annual report.
- 4.2.2.10 Merchantable volumes that are permanently retained to create stand structure shall be measured and treated as production in cut control management.
- 4.2.2.11 Merchantable volumes retained for structure retention purposes shall be reconciled every 5 years at the end of each cut control period.
- 4.2.2.12 Caribou Mountain Forestry shall measure and monitor their structure retention in a manner acceptable to Alberta.

4.2.3 Species of Special Management Concern

Arctic Grayling and Bull Trout

DISCUSSION

The GDP and AOP shall describe the harvesting program that is agreed will create the desired future forest, taking into consideration the full range of values including habitat for species of special management concern.

Arctic Grayling are classified as a “Species of Special Concern” under the Alberta Wildlife Act. One of the greatest contributing factors threatening this species related to the forest industry is the density of linear features (e.g., Class I-IV roads, skid trails, and all pre-existing access). Development of the GDP and AOP must focus on ensuring that best management practices related to construction, maintenance and reclamation of roads is in place, with the primary intent being the protection of fish habitat and productivity. This is achieved through the maintenance of natural hydrologic processes, avoiding erosion, and increasing protection of streams where risks to both species are identified.

Timber harvest planning and operating ground rules must reflect the sensitive nature of this species. These operating rules serve three primary purposes:

- a) protection of the long-term integrity, connectivity, productivity and access of arctic grayling to the spawning, rearing, feeding and over wintering habitat within the watershed;
- b) protection of water quality and quantity metrics that provide a key component of the habitat that supports native fish species within watersheds (e.g. temperature, dissolved oxygen content, natural sediment, avoidance of anthropogenic sedimentation and productivity) to ensure the continued occupancy and use of historical watersheds by this species; and
- c) minimize the industrial footprint and density of linear features intersecting watercourses within arctic grayling and watersheds to reduce the potential for secondary disturbance and mortality from recreational use.

GROUND RULE

Arctic Grayling

Locations of existing arctic grayling can be identified using the Fisheries and Wildlife Management Information System (FWMIS), and the associated Fish and Wildlife Internet Mapping Tool (FWMIT). Within or adjacent to known locations:

- 4.2.3.1 Operational planning by the timber disposition holder should incorporate the use of Alberta’s Wet Areas Mapping tool to identify areas that are sensitive to disturbance. Field confirmation of these sites including depth to water, potential disruption of groundwater flows, and areas at high risk of erosion in wet or riparian areas can be a useful tool in determining road and crossing location.
- 4.2.3.2 Unless otherwise approved, all operations should occur outside the restricted activity period (RAP) of April 16 to July 15. Early winter operations are preferred; and during dry or frozen conditions are best.
- 4.2.3.3 Site preparation activities within 100 meters of watercourses must prevent input of sedimentation.

4.2.4 Soils

GROUND RULE

4.2.4.1 The total area covered by temporary roads, bared landing areas, and displaced soil created by timber harvesting operations shall not exceed five percent of each harvest area without prior approval of Alberta. Blocks less than 4 ha in size may have areas within the above categories up to seven percent with any exceptions to this requiring prior approval by Alberta.

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 High Level Forest Area.