



Northland Forest Products Ltd.

Forest Harvest Plan

Planning Compartment "EAH"

CTLA150001

Forest Harvest Plan – EAH16-21

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Version 1.0

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1.0 Introduction

This Forest Harvest Plan (FHP) details the timber harvest activities under CTLA150001 located in Forest Management Unit A15. This plan, EAH16-21, comprises 16 proposed cutblocks with a total area of 265.1 ha. Total estimated volumes are 32,577 m³ conifer and 2,711 m³ deciduous. All cutblocks will be harvested in the winter under frozen ground conditions.

It should be noted that access included in this plan corresponds closely with a second FHP, Husky16-21, that will be submitted separately. In block roads that run through Husky cutblocks that will be utilized to access blocks in this plan are not shown on the EAH FHP map.

2.0 Integration with Other Stakeholders

2.1 Trapper Referral & Comments

Letters and maps were sent by registered mail to trapline holders potentially affected by this FHP (Table 1).

Table 1: Trapline Holders

Trapline number	Holder	Address	Date contacted by Registered Mail (letter and map)
TPA 2297	Rose L. Beaton	6 Sounderson Ave. Fort McMurray, AB T9H 1N2	August 19, 2016
TPA 2214	Rick Whitten	136 Grenoble Cres. Fort McMurray, AB T9H 3X7	August 19, 2016
TPA 2718	Dave V. Kalkeren	296 Beaton Pl. Fort McMurray, AB T9K 2B8	August 19, 2016 September 1, 2016 - (updated map)
TPA 2006	Stephen Ganter	General Delivery Fort McKay, AB TOP 1C0	September 1, 2016

Notice of commencement of operations will also be sent out no later than ten days before operations begin.

Northlands will respond promptly to any requests that trappers may have as it concerns their traplines and the public in general.

2.2 Forest Recreation Groups/Guides & Outfitters/Grazing Lease Operators

No recreation groups, guides or outfitters have been identified. If signs of an outfitter are found, they will be contacted and informed of operations in the area. There are no grazing lease operators in the area.

2.3 Historical Resource Protection

The proposed cutblocks within this FHP were screened for high potential sites on June 21, 2016. Areas that were identified were typed out of the blocks using avoidance techniques.

2.4 Integration with FMA Holder

A copy of this FHP has been forwarded to Alberta Pacific for review. Incidental deciduous will be purchased by Alberta Pacific, however, if Alberta Pacific decides it is not feasible based on volumes, avoidance techniques will be used to leave the deciduous standing. A sign off letter provided by ALPAC will be forwarded to Alberta Agriculture and Forestry once received.

2.5 Third Party Agreements

Northlands Forest Products Ltd. has reciprocating road use agreements with Suncor Energy, Teck Resources and Total E & P. This is relevant to the use of Suncor LOC 080365, Suncor LOC 000455, Suncor LOC 111457 and Suncor LOC 063016 (the East Athabasca Corridor).

Northlands will obtain facility crossing agreements with disposition holders as needed for crossings in this plan prior to operations.

2.6 Consultative and Protective Notations

The following consultative and protective notations will be impacted by this plan:

- CNT 090030 (Alberta Government, Forestry and Emergency Response) – Timber dispositions do not require referral for this CNT
- CNC 000001 (Suncor Energy Inc)– Consultation required for application of new surface dispositions to determine if the project conflicts with the development of the holder’s oil sands lease. Since Northlands Forest Products already holds CTLA150001, no consultation is required.
- CNT 050008 (Alberta Department of Energy) – Land status report indicates the CNT is for ‘Quarriable Minerals’ and indicates no restrictions.
- CNT 870307 (Alberta Energy Regulator) – Disposition applications require referral to Alberta Energy Regulator, Oil Sands Mining Authorizations. Timber harvesting dispositions are exempt from this notation.
- CNC 020004 (Syn crude Canada Ltd) – Consultation for surface dispositions is required to avoid conflict with development of Future Lease 29 Mine project. Since Northlands Forest Products already holds CTLA150001, no consultation is required.
- CNT 040034 (Alberta Department of Energy) - Land status report indicates the CNT is for ‘Metallic Minerals’ and indicates no restrictions.
- CNC 020008 (Suncor Energy Ltd) – No dispositions without prior consultation with Suncor Energy. Since Northlands Forest Products already holds CTLA150001, no consultation is required.
- CNT 040038 (Alberta Department of Energy) - Land status report indicates the CNT is for ‘Metallic Minerals’ and indicates no restrictions
- CNC 020002 (Syn crude Canada Ltd) – No dispositions without consultation. Since Northlands Forest Products already holds CTLA150001, no consultation is required.
- CNT 040028 ((Alberta Department of Energy) - Land status report indicates the CNT is for ‘Metallic Minerals - Limestone’ and indicates no restrictions.
- CNT 040030 (Alberta Department of Energy) – Land status report indicates the CNT is for ‘Metallic Minerals - Limestone’ and indicates no restrictions.

2.7 First Nations Consultation

First Nation Consultation is completed at the GDP stage. Prior to approval of the GDP, consultation with First Nations is documented and submitted to the Alberta Government for review.

3.0 Operational Considerations

3.1 Utilization Standard

The coniferous utilization standard to be used for this CTL is **15/11 cm**.

The deciduous utilization standard to be used for this CTL is **15/10 cm**.

Tree, stand, broken piece and cull merchantability standards will be consistent with the conditions listed on the disposition and in the Northeast Alberta Operating Ground Rules.

3.2 Debris Disposal

Debris disposal will be conducted as per approved Annual Operating Plan and corresponding amendments.

3.3 Caribou/Wildlife Protection

No proposed cutblocks within this FHP are in a Key Wildlife Biodiversity Zone or Caribou Range.

A search of the Fish and Wildlife Management Information System (FWMIS) database was completed on June 2, 2016 and August 31, 2016. Species that have been reported in this area included:

- Blackburnian Warbler
- Cape May Warbler
- Sandhill Crane
- American Bittern
- Canada Lynx
- Common Yellowthroat

Of the species reported through the FWMIS database search, none are currently listed as species at risk within Alberta, however, the Cape May Warbler has been recommended to be listed as a 'Species of Special Concern'. The Blackburnian warbler, cape may warbler, sandhill crane, american bittern and common yellowthroat begin their southern migration in the fall and will not be present when the blocks outlined in this FHP are harvested. Based on this, harvest operations should have little to no impact on these bird species.

As per NAOGRs section 7.7.6, a 100 meter buffer is required on Sandhill Crane Nesting Areas. None were observed during layout.

A raptor tree nest was observed in Block 14249. A 100 meter buffer was applied to this nesting site.

3.4 Insect, Disease and Fire

No significant infestations of insect or disease were found in the area during layout. This FHP does not contain any fire salvage blocks.

4.0 Access Management

All access roads, including interblock roads, are shown in Appendix A, crossings are shown in Appendix B and on the FHP map accompanying this plan. Operations in this FHP will utilize two public highways, Hwy 63 and Hwy 55, to access the operating area as well as existing industrial LOCs are discussed in Section 2.5.

All proposed roads within this FHP will be built to a Class IV standard as per Table 3 of the OGR. Road right of way widths will be minimized as much as possible and will generally be between 7-10 meters. All creek crossings will be constructed using snow fills. These crossings will be notched to allow them to melt back to creek embankments during the spring. At the time of operations, the harvest supervisor may change crossing structures to any acceptable crossing type as per OGR 11.4.1.

Existing seismic lines used for block access and in-block roads will not be reclaimed and will be left open for trapper access. All other access, not under disposition, will be deactivated using rollback following harvesting and hauling operations. ATV access may be maintained to allow access for pile burning operations the following year.

Any changes to roads or crossings will adhere to the protocol defined in **Section 3.4.9.1** of the Ground Rules.

4.1 Road Disturbance

A list of cutblocks and their estimated road disturbance has been provided in Table 2 below. Some roads exceed the 5% disturbance threshold of the harvest area as per OGR **Section 9.0.3**. Details on the requested variances are outlined in Section 7.0.

Table 2: Road Disturbance within Cutblocks

Planning Unit	Block Number	Cutblock Area (ha)	Road Area (ha)	Disturbance (%)
EAH	14221	8.8	0.4	4.4
EAH	14227	2.8	0.2	6.9
EAH	14228	49.9	1.6	3.2
EAH	14229	10.0	0.5	4.7
EAH	14231	15.0	0.5	3.2
EAH	14232	2.1	0.1	4.3
EAH	14235	49.6	1.0	1.9
EAH	14238	3.8	0.1	2.7
EAH	14239	2.2	0.1	3.1
EAH	14247	11.6	0.7	5.8
EAH	14249	48.7	1.5	3.0
EAH	14250	4.2	0.2	4.6
EAH	14252	24.7	0.9	3.7
EAH	14253	22.4	1.0	4.6
EAH	14254	3.3	0.1	3.3
EAH	14256	5.9	0.3	5.0
Total	16	265.1	9.0	4.0

5.0 Operational Design and Block Comments

A complete block list is provided in Appendix C. Since this plan is located within the Mineable Oils Sands Area (MOSA), variance calculations are not required and detailed block plans were not provided.

Cutblocks were laid out in a manner to achieve several objectives. These include maximizing operational efficiency, incorporating natural topography and forest ecology, reducing forest and land fragmentation, reducing linear disturbance, and mitigating impacts on other resources and values. All available tools such as LiDAR, Alberta Vegetation Inventory, and various third party datasets, were used to prepare the plan to meet the objectives of the DFMP and OGR in an efficient and cost effective manner.

Northlands will identify and leave a patch (or patches) of timber representative of the area being harvested to meet the target as per Section 7.4 of the OGRs. The actual size and location of these “patches” will be confirmed through GPS traverse or post-harvest photo interpretation. Actual retention will be reconciled with the as-built information and reported in the next Annual Operating Plan. Retention will also focus on snags, immature conifer understory, non-merchantable stems and clumps, where operationally and silviculturally feasible.

No significant weed issues were identified in this area at the time of planning. Operations will follow the *Appendix 3 – Directive for weed management* in the OGR.

6.0 Compartment Assessment

A compartment assessment was not required for this plan.

7.0 Ground Rule Deviations

Northlands would like to request variances from OGR **Section 9.0.3** regarding the percent road disturbance for several blocks as listed below:

- Block 14247 is greater than 7 ha in size with roads exceeding 5% of the total area. The block is 11.62 ha, and is quite narrow with an arm that required an additional road to facilitate harvest operations. The percent area of these roads is 5.77%.
- Block 14256 is less than 7 ha in size with roads exceeding 5% of the total area. The block is 5.88 ha and is quite narrow. There is one road down the middle of the block to facilitate harvest operations. The percent area of this road is 5.01%.
- Block 14227 is less than 7 ha in size with roads exceeding 5% of the total area. The block is 2.8 ha, and is very narrow with one road down the middle to facilitate harvest operations. The percent area of this road is 6.90%.

8.0 Silviculture

All blocks under CTLA1500001 within the EAH are located within the MOSA. Current plans within MOSA are for the liquidation of all mature conifer and deciduous stands over a 20 year planning horizon. As such, there are no reforestation liability requirements within MOSA. Therefore, no regeneration stratum information is included in this plan. Additionally, no watercourse crossings will be left in for silvaculture.

9.0 Validation by Registered Forest Practitioner

Plan prepared and submitted on behalf of Northland Forest Products Ltd by:

Jordan Dyck, RPFT
Planning Forester



Date: September 2, 2016