



Northland Forest Products Ltd.

and

Alberta-Pacific Forest Industries Inc.

Forest Harvest Plan

Planning Compartment "East May Tower"

Planning Unit 075144

FMA9100029/CTLL030047

Forest Harvest Plan – EMT17-22

Date Submitted: November 20, 2017

Amendment Date: December 6, 2018

Amendment Date: January 10, 2019

Version 3.0

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1.0 Introduction

This integrated Forest Harvest Plan (FHP) details the timber harvest activities under located in Forest Management Unit L03. This plan, EMT17-22, comprises 80 proposed cutblocks with a total area of 1,075.0 ha. Total estimated volumes are 119,439 m³ conifer and 76,082 m³ deciduous and this plan is being submitted for appraisal, for a five-year FHP approval under 2017/18 Northland Forest Products Ltd. (Northland) and Alberta-Pacific Forest Industries Inc. (Alberta-Pacific) Annual Operating Plan (AOP). All cutblocks in this FHP will be harvested in the winter under frozen ground conditions.

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 2386*	Richard R St Jean	Box 205 Plamondon, AB, T0A 2T0	November 13, 2017
TPA 2912	Marlin Burnett	Box 80 Atmore, AB, T0A 0E0	November 13, 2017
TPA 2916	Jordon Huppie	130 Woodward Cres Anzac, AB, T0P 1J0	November 13, 2017

*A short segment of existing access is located within TPA2386 but no cutblocks.

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 active recreation groups, guides or outfitters have been identified.

2.3 Historical Resource Protection

The proposed cutblocks within this FHP were screened for high potential sites in the 2015 and again in October 2018. Areas that were identified with potential for containing historical resources were excluded from the blocks using avoidance techniques.

2.4 Integration with FMA Holder

This is an integrated plan between the FMA holder and CTL holder. Both companies have validated the plan (Section 9.0).

2.5 Third Party Agreements

Road use agreements will be obtained prior to commencing operations.

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

2.6 Consultative and Protective Notations

Within the FHP area there is one consultative and protective notations that may be impacted (Table 2).

Table 2: Consultative and Protective Notations

Disposition	Holder	Comments
PNT 780070	Alberta Government – Lands – Wandering River Office	Silviculture plot. #3 restriction (no agricultural disposition). A portion of block 335 is within the boundary of the PNT (approximately 50m of overlap). Northland has consulted with AAF and no concerns were noted regarding the overlap.
PNT 920100	Alberta Government – Lands – Wandering River Office	This PNT is to preserve a portion of a superior stand for future seed collection. The majority of the PNT is located within block 317. Northland has consulted with AAF regarding this PNT and as long as Northland themselves does not need this stand for seed collection, the site can be harvested.

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 **15/10 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

The majority of the blocks included in this FHP are located within the Wiau Caribou Range (Table 3). Blocks located within the caribou range will be targeted for harvest operations early in the winter to avoid mid to late winter operations as much as possible.

Table 3: Blocks within Caribou Range

Block Number	Caribou Range Coverage
317	Partial
600	Entire Block
601	Entire Block
602	Entire Block
604	Partial
605	Entire Block
607	Partial
608	Entire Block
609	Entire Block
611	Entire Block
613	Entire Block
617	Entire Block
619	Entire Block
620	Entire Block
621	Entire Block
623	Entire Block
624	Entire Block
625	Entire Block
626	Entire Block
628	Entire Block
629	Entire Block
630	Entire Block
632	Entire Block
633	Entire Block
634	Partial
635	Entire Block
636	Entire Block
637	Entire Block
0537	Entire Block
0557	Entire Block
0797	Entire Block
1904	Entire Block
1955	Entire Block
2666	Entire Block
2976	Entire Block
0579	Entire Block
0754	Entire Block
0798	Entire Block
0799	Entire Block
0828	Entire Block
0842	Entire Block
1607	Entire Block
1633	Entire Block
1733	Entire Block
1751	Entire Block
1752	Entire Block
1824	Entire Block
1826	Entire Block
1870	Entire Block
1891	Entire Block
1915	Entire Block

2057	Entire Block
2090	Entire Block
2135	Entire Block
2451	Entire Block
2958	Entire Block

A search of the Fish and Wildlife Management Information System (FWMIS) database was completed on November 10, 2017. Species that have been reported in this area included:

- Canada warbler
- Canadian toad
- Caspian tern
- Sharp-tailed grouse
- Trumpeter swan

Of the species reported through the FWMIS database search, the trumpeter swan is listed as 'Threatened' in Alberta and 'Not at Risk' federally; the Canada warbler is listed as 'At Risk' in Alberta and 'Threatened' federally; the Canadian toad is listed as 'Data Deficient' in Alberta and 'Not at Risk' federally; and the sharp-tailed grouse is listed as 'Sensitive' within Alberta however is not listed federally.

There are no trumpeter swan lakes in the area of this FHP, according to the AEP Wildlife Sensitivity data (April 2016). Additionally, none were observed during layout activities.

The Canada warbler is a migratory species that begins its 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 this and other migratory bird species.

The Canadian toad hibernates in underground borrows in upland areas and can be located quite far from water. Hibernation generally occurs between October and April and is more common in habitat with sandy soils with easier burrowing. Harvest operations will occur while this species is in hibernation. There are no known hibernation locations within the project area.

The project is not located within the area identified by AEP for sharp-tailed grouse habitat (AEP wildlife sensitivity data, April 2016). In spring, males move to traditional grounds to perform their breeding ritual. These locations are known as leks. There are no known leks within the FHP area.

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 inter-block 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 one public highway, Hwy 63, other industrial LOCs, right of ways and existing cutlines as discussed in Section 2.5.

All proposed roads within this FHP will be built to a Class IV standard as per Table 4 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 a combination of log fills and 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.

Seismic lines that are being used for block access and in-block roads currently utilized by the trapper will not be reclaimed and will be left open for trapper access. Seismic lines that are used for block access and in-block roads that have regrowth greater than 3 meters will be reclaimed. 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 3.5.5.1** of the Ground Rules.

4.1 Road Disturbance

A list of cutblocks and their estimated road disturbance has been provided in Table 4 below. For cutblocks greater than 7 ha in size, roads in one block exceed the 5% disturbance threshold of the harvest area as per OGR **Section 9.2**. Additional details on this deviation are included in Section 7.0.

Table 4: Road Disturbance within Cutblocks

Block Number	Operator	Cutblock Area (ha)	Disturbance (%)
316	NFPL	18.5	2.5
317	NFPL	104.0	1.4
321	NFPL	15.5	1.2
322	NFPL	40.8	1.1
335	NFPL	20.5	2.8
336	NFPL	15.7	1.6
337	NFPL	9.6	2.5
600	NFPL	10.6	2.0
601	NFPL	18.1	2.8
602	NFPL	19.0	0.7
604	NFPL	4.3	1.7
605	NFPL	103.8	1.6
607	NFPL	11.5	3.2
608	NFPL	6.1	2.5
609	NFPL	10.3	3.4
611	NFPL	4.3	0.0
613	NFPL	26.1	3.1
617	NFPL	2.4	1.3
619	NFPL	2.1	0.1
620	NFPL	14.2	3.2
621	NFPL	95.4	2.5
623	NFPL	9.7	3.4
624	NFPL	3.9	6.6
625	NFPL	8.4	3.0
626	NFPL	13.4	3.3
628	NFPL	26.3	3.6
629	NFPL	13.7	2.3
630	NFPL	1.7	6.5
632	NFPL	7.0	1.6
633	NFPL	60.2	1.1
634	NFPL	49.3	2.4
635	NFPL	26.7	2.9
636	NFPL	14.8	6.7
637	NFPL	11.4	2.5

0537	NFPL	3.7	2.0
0557	NFPL	4.1	2.8
0797	NFPL	1.5	5.2
1904	NFPL	2.9	3.4
0579	ALPac	3.4	9.3
0754	ALPac	2.1	3.4
0828	ALPac	4.6	3.8
1870	ALPac	2.9	5.2
1891	ALPac	4.0	5.5
1733	ALPac	16.8	4.3
1752	ALPac	2.2	2.8
1607	ALPac	7.4	1.7
2090	ALPac	8.5	10.1
2958	ALPac	13.4	5.0
1824	ALPac	2.3	3.7
1826	ALPac	3.7	11.5
2451	ALPac	8.9	6.5
1915	ALPac	1.5	4.8
3011	ALPac	17.4	7.0
2978	ALPac	6.6	2.7
3225	ALPac	6.6	6.4
3265	ALPac	10.4	7.9
3463	ALPac	4.4	3.2
5571	ALPac	7.5	4.5
990	ALPac	11.3	6.8
2818	NFPL	8.0	1.3
2918	NFPL	3.5	1.8
2949	NFPL	3.5	0.0
3362	NFPL	3.9	4.9
3431	NFPL	1.1	9.9
3460	NFPL	9.5	5.3
208	NFPL	9.3	3.7
226	NFPL	9.5	1.2
403	NFPL	27.0	1.9
543	NFPL	11.8	3.9
559	NFPL	2.9	1.9
993	NFPL	4.1	0.0
Total		1,075.0	

4.2 Protection of Roadside Vegetation

Roadside vegetation includes non-merchantable trees, shrubs, forbs and grasses located adjacent to a Class I, II or III road. During operations, this vegetation will be maintained by avoidance and removing only the merchantable timber, where possible. Roadside vegetation will be left intact as much as possible along Hwy 63 to reduce visual impacts of the harvest operation.

5.0 Operational Design and Block Comments

A complete block list is provided in Appendix C. A summary of the variance from the approved Spatial Harvest Sequence (SHS) is provided in Appendix D as well as shown on the variance map included with this plan.

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

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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.

Northland will identify and leave a patch (or patches) of timber representative of the area being harvested to meet the retention target as per **Section 7.4** of the OGRs. The size and location of these “patches” will be confirmed through GPS traverse or post-harvest photo interpretation. 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.

White Spruce understory will be protected using high effort understory protection in stands identified as greater than 600stems/ha by the Alberta Vegetation Inventory (AVI), as well as any potential areas found to have understory present that is not identified by the AVI. Any blocks found to have understory amounts between 400 stems/ha and 600 stems/ha will be protected utilizing the avoidance method. Blocks requiring understory protection or understory avoidance are noted within *Appendix C – Cutblock Area and Volume Summary Table*.

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

Northland would like to request variances from OGR **Section 9.2** regarding the percent road disturbance for several blocks as listed below:

- Block 636 is greater than 7 ha in size with roads exceeding 5% of the total area. The block is 14.8 ha, and is circular with two large deletions in the middle. The road goes around the largest deletion in order to provide access to the block, with a second spur road. The percent area of these roads is 6.7%.
- Block 2090 is greater than 7 ha in size with roads exceeding 5% of the total area. This block is 8.5 ha, but narrow. One road with a turnaround was planned down the middle of the block. The percent area of these roads is 10.1%.
- Block 2451 is greater than 7 ha in size with roads exceeding 5% of the total area. This block is 8.9 ha, but is narrow and its block road is required to access other blocks. The percent area of these roads is 6.5%.
- **Block 0990** is greater than 7 ha in size with roads exceeding 5% of the total area. This block is 11.3 ha, but has narrow fingers. The percent area of these roads is 6.8%.
- **Block 3011** is greater than 7 ha in size with roads exceeding 5% of the total area. This block is 17.4 ha, but has narrow fingers and avoids some wet areas. The percent area of these roads is 7.0%.
- **Block 3265** is greater than 7 ha in size with roads exceeding 5% of the total area. This block is 10.4 ha, but is narrow. The percent area of these roads is 7.9%.
- **Block 3460** is greater than 7 ha in size with roads exceeding 5% of the total area. This block is 9.5 ha, but is narrow and its block road is required to access other blocks. The percent area of these roads is 5.3%.

8.0 Silviculture

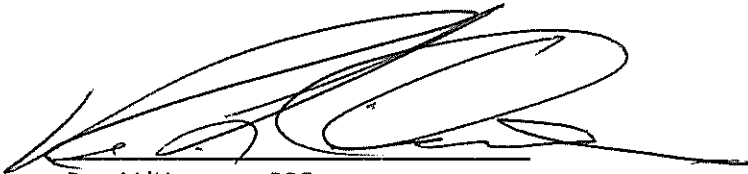
No watercourse crossings will be left in for silviculture.

9.0 Validation by Registered Forest Practitioner



Darcy Sulz, RPF
For: Northland Forest Products

Date: January 10, 2019



Remi L'Heureux, RPF
Planning Lead
Alberta Pacific Forest Industries

Date: January 10, 2019

Appendix A: List of Roads

Road Name	Road Class	Season	Road Length (m)
EMT1000	3	All Season	1992
EMT337A	4	Winter	1773
EMT337B	4	Winter	266
EMT316A	4	Winter	291
EMT317A	4	Winter	813
EMT317B	4	Winter	413
EMT317C	4	Winter	270
EMT321A	4	Winter	374
EMT322A	4	Winter	1490
EMT322B	4	Winter	381
EMT323A	4	Winter	1354
EMT335A	4	Winter	889
EMT335B	4	Winter	154
EMT336A	4	Winter	399
EMT601A	4	Winter	322
EMT602A	4	Winter	265
EMT604A	4	Winter	126
EMT605A	4	Winter	1019
EMT605B	4	Winter	1153
EMT607A	4	Winter	463
EMT608A	4	Winter	153
EMT608B	4	Winter	1055
EMT608B	4	Winter	1756
EMT609A	4	Winter	241
EMT609A	4	Winter	1075
EMT609B	4	Winter	270
EMT613A	4	Winter	2114
EMT617A	4	Winter	700
EMT620A	4	Winter	285
EMT621A	4	Winter	992
EMT621B	4	Winter	988
EMT621C	4	Winter	606
EMT621D	4	Winter	524
EMT622A	4	Winter	1852
EMT624A	4	Winter	438
EMT625A	4	Winter	1542
EMT625A	4	Winter	338
EMT626A	4	Winter	223
EMT626B	4	Winter	257
EMT626C	4	Winter	958
EMT626C	4	Winter	541
EMT626C	4	Winter	173

EMT628B	4	Winter	519
EMT628B	4	Winter	1477
EMT629A	4	Winter	483
EMT629B	4	Winter	288
EMT630A	4	Winter	2090
EMT632A	4	Winter	359
EMT633A	4	Winter	861
EMT633B	4	Winter	2379
EMT633B	4	Winter	654
EMT633B	4	Winter	14
EMT634A	4	Winter	1177
EMT634B	4	Winter	1342
EMT635A	4	Winter	1360
EMT636A	4	Winter	1637
EMT636B	4	Winter	178
EMTNH	3	All Season	1221
EMTNH	4	Winter	670
EMTNH	4	Winter	1324
EMTNH	4	Winter	129
EMTNH	4	Winter	110
LOC022577	4	Winter	292
LOC042797	4	Winter	2842
LOC042878	4	Winter	955
LOC770873	4	Winter	531
LOC840946	4	Winter	1161
LOC840946	4	Winter	337
LOC850458	4	Winter	1980
LOC920895	4	Winter	1504
LOC931800	4	Winter	112
LOC962243	4	Winter	1655
LOC962872	4	Winter	892
LOC992252	4	Winter	2551
MSL962982	4	Winter	481
MSL963883	4	Winter	631
NIXON 3	2	All Season	5255
NIXON 3	2	All Season	1752
Skid1	4	Winter	50
Skid2	4	Winter	88
EMT600M	4	Winter	4337
LOC962872	4	Winter	790
RC07514405374A	4	Winter	225
RC07514405791A	4	Winter	533
RC07514407841A	4	Winter	395
RC07514418701A	4	Winter	802
RC07514420901A	4	Winter	447
RC07514421351A	4	Winter	785
RC07514429581A	4	Winter	1098

RC07514429701A	4	Winter	2595
RC07514430114A	4	Winter	1517
RC07514430114D	4	Winter	343
RC07514430114F	4	Winter	374
RC07515426664A	4	Winter	226
DLO080267	4	Winter	688
LOC063489	4	Winter	1100
LOC5868	4	Winter	803
LOC962243	4	Winter	822
RC07515428184A	4	Winter	301
RC07515432251A	4	Winter	456
RC07515432251B	4	Winter	249
RC07515433624A	4	Winter	468
RC07515434604A	4	Winter	1306
RC07615402261A	4	Winter	270
RC07615404034A	4	Winter	947
RC07615405434A	4	Winter	1029
RC07615405591A	4	Winter	293
EMT613_P1*	4	Winter	50
EMT613_P2*	4	Winter	50
EMT613_P3*	4	Winter	50
EMT613_P4*	4	Winter	50
EMT613_P5*	4	Winter	50
Total			96076

* Push-out

Appendix B: Watercourse Crossings

Crossing Number	Road Name	Stream Class	Crossing Type	Latitude	Longitude
EMT-2017074	EMT633B	Ephemeral	Snow Fill	55.468009	-112.146599
EMT-2017075	EMT635A	Ephemeral	Snow Fill	55.487627	-112.134515
EMT-2017086	LOC840946	Intermittent	Snow Fill	55.511374	-112.163588
EMT-2017089	LOC962243	Transitional	Snow Fill	55.554641	-112.239305
EMT-2017091	EMT322A	Ephemeral	Snow Fill	55.556322	-112.252644
EMT-2017093	EMT336A	Small Permanent	Snow Fill	55.55432	-112.249048
EMT-2017094	EMT336A	Ephemeral	Snow Fill	55.553991	-112.258373
EMT-2017095	EMT323A	Ephemeral	Snow Fill	55.551551	-112.262762
EMT-2017098	EMT317B	Ephemeral	Snow Fill	55.56974	-112.241972
EMT-2017099	EMT337A	Small Permanent	Snow Fill	55.567455	-112.263721
EMT-2017111	MSL963883	Transitional	Snow Fill	55.526913	-112.193951
EMT-2017112	EMT605B	Ephemeral	Snow Fill	55.503222	-112.170649
EMT-2017113	EMT609A	Intermittent	Snow Fill	55.511345	-112.183315
EMT-2017114	EMT609A	Intermittent	Snow Fill	55.501556	-112.187087
EMT-2017115	EMT609A	Intermittent	Snow Fill	55.501126	-112.186956
EMT-2017116	EMT617A	Intermittent	Snow Fill	55.508636	-112.137043
EMT-2017117	EMT621A	Ephemeral	Snow Fill	55.503659	-112.150273
EMT-2017119	LOC850458	Intermittent	Snow Fill	55.517225	-112.185497
EMT-2017120	LOC850458	Intermittent	Snow Fill	55.518425	-112.185229
EMT-2017121	EMT1000	Ephemeral	Snow Fill	55.534549	-112.255009
EMT-2017122	EMT1000	Intermittent	Snow Fill	55.53242	-112.249987
EMT-2017123	LOC992252	Ephemeral	Snow Fill	55.520458	-112.2187
EMT-2017125	EMT633B	Ephemeral	Snow Fill	55.465033	-112.148923
EMT-2017127	EMT633B	Ephemeral	Snow Fill	55.461961	-112.132928
EMT-2017134	EMTNH	Ephemeral	Snow Fill	55.567902	-112.23654
0794	skid	Ephemeral	Snow Fill	55.48103734	-112.1559957
0804	RC07514407841A	Ephemeral	Snow Fill	55.48139808	-112.1542744
1617	EMT622A	Ephemeral	Snow Fill	55.499453	-112.127183
1733	RC07514417331A	Ephemeral	Snow Fill	55.49374775	-112.1445831
1743	RC07514417331A	Ephemeral	Snow Fill	55.4941098	-112.1430124
1871	RC07514418701A	Intermittent	Snow Fill	55.49170231	-112.1610991
2045	RC07514429701A	Ephemeral	Snow Fill	55.51206706	-112.143427
2082	RC07514420901A	Ephemeral	Snow Fill	55.50749434	-112.1327027
2944	RC07514429701A	Ephemeral	Snow Fill	55.52492759	-112.143716
3022	RC07514430114C	Ephemeral	Snow Fill	55.52169037	-112.1744826
3041	skid	Ephemeral	Snow Fill	55.52071052	-112.1694531

Appendix C: Cutblock Area and Volume Summary

Disposition	Block Number	Opening Number	Alberta Pacific Source ID	Season	Landbase	Understorey Protection	Area (ha)	Conifer Volume (m3)	Deciduous Volume (m3)	Total Volume (m3)
CTLL030047	316	4150760953	NC07615409534	Frozen	C		18.5	2059	686	2745
CTLL030047	317	4150761041	NC07615410414	Frozen	C		104.0	14451	9357	23809
CTLL030047	321	4150760366	NC07615403664	Frozen	C		15.5	1678	1414	3093
CTLL030047	322	4150760326	NC07615403264	Frozen	C		40.8	7261	3141	10402
CTLL030047	335	4150760344	NC07615403444	Frozen	C		20.5	2950	2089	5039
CTLL030047	336	4150760384	NC07615403844	Frozen	C		15.7	1715	1039	2754
CTLL030047	337	4150760945	NC07615409454	Frozen	C		9.6	1205	77	1283
CTLL030047	600	4150752504	NC07515425044	Frozen	C		10.6	1065	32	1097
CTLL030047	601	4150752543	NC07515425434	Frozen	C		18.1	1578	508	2085
CTLL030047	602	4150752591	NC07515425914	Frozen	C		19.0	1462	646	2108
CTLL030047	604	4150751387	NC07515413874	Frozen	C		4.3	621	68	689
CTLL030047	605	4140751911	NC07514419114	Frozen	C		103.8	13596	4048	17643
CTLL030047	607	4150752433	NC07515424334	Frozen	C		11.5	831	427	1258
CTLL030047	608	4150752475	NC07515424754	Frozen	C		6.1	477	196	673
CTLL030047	609	4140751944	NC07514419444	Frozen	C		10.3	1030	535	1565
CTLL030047	611	4140751833	NC07514418334	Frozen	C		4.3	706	22	728
CTLL030047	613	4140752043	NC07514420434	Frozen	C		26.1	1983	1540	3523
CTLL030047	617	4140752082	NC07514420824	Frozen	C		2.4	362	254	616
CTLL030047	619	4140751786	NC07514417864	Frozen	C		2.1	272	225	497
CTLL030047	620	4140751627	NC07514416274	Frozen	C		14.2	1620	569	2189
CTLL030047	621	4140751737	NC07514417374	Frozen	C		95.4	11257	5247	16503
CTLL030047	623	4140750875	NC07514408754	Frozen	C		9.7	1139	302	1441
CTLL030047	624	4140750799	NC07514407994	Frozen	C		3.9	286	135	422
CTLL030047	625	4140750817	NC07514408174	Frozen	C		8.4	697	168	864
CTLL030047	626	4140750767	NC07514407674	Frozen	C		13.4	1409	201	1611
CTLL030047	628	4140750863	NC07514408634	Frozen	C		26.3	2311	2259	4570
CTLL030047	629	4140750529	NC07514405294	Frozen	C		13.7	1068	137	1205
CTLL030047	630	4140751610	NC07514416104	Frozen	C		1.7	147	5	152
CTLL030047	632	4140751772	NC07514417724	Frozen	C		7.0	742	581	1324
CTLL030047	633	4140750564	NC07514405644	Frozen	C		60.2	9149	3070	12219
CTLL030047	634	4140751804	NC07514418044	Frozen	C		49.3	6456	2169	8625
CTLL030047	635	4140751792	NC07514417924	Frozen	C		26.7	2985	1439	4424
CTLL030047	636	4140751623	NC07514416234	Frozen	C		14.8	664	502	1166
CTLL030047	637	4140750897	NC07514408974	Frozen	C		11.4	1217	239	1455
CTLL030047	0537	4140750537	NC07514405374	Frozen	C		3.7	467	152	619
CTLL030047	0557	4140750557	NC07514405574	Frozen	C		4.1	492	330	822
CTLL030047	0797	4140750797	NC07514407974	Frozen	C		1.5	205	203	407
CTLL030047	1904	4140751904	NC07514419044	Frozen	C		2.9	332	211	543
CTLL030047	1955	4140751955	NC07514419554	Frozen	C		1.7	229	106	335
CTLL030047	2666	4150752666	NC07515426664	Frozen	C		2.0	167	6	173
FMA9100029	0579	4140750579	FC07514405791	Frozen	D		3.4	144	566	711
FMA9100029	0754	4140750784	FC07514407841	Frozen	D		2.1	85	244	330
FMA9100029	0798	4140750798	FC07514407981	Frozen	D		2.2	95	272	367
FMA9100029	0799	4140750799	FC07514407991	Frozen	D		1.0	34	178	212
FMA9100029	0828	4140750828	FC07514408281	Frozen	D		4.6	257	839	1096
FMA9100029	0842	4140750842	FC07514408421	Frozen	D		3.3	118	480	598
FMA9100029	1607	4140751607	FC07514416071	Frozen	D	Y	7.0	196	1539	1735
FMA9100029	1633	4140751633	FC07514416331	Frozen	D	Y	5.1	472	865	1338
FMA9100029	1733	4140751733	FC07514417331	Frozen	D		16.8	631	3193	3824
FMA9100029	1751	4140751751	FC07514417511	Frozen	D		1.7	58	358	417
FMA9100029	1752	4140751752	FC07514417521	Frozen	D		2.2	122	486	608
FMA9100029	1824	4140751824	FC07514418241	Frozen	D		2.3	85	511	596
FMA9100029	1826	4140751826	FC07514418261	Frozen	D		3.7	203	687	890
FMA9100029	1870	4140751870	FC07514418701	Frozen	D		2.9	91	449	540
FMA9100029	1891	4140751891	FC07514418911	Frozen	D		4.0	180	775	955
FMA9100029	1915	4140751915	FC07514419151	Frozen	D		1.5	56	256	313
FMA9100029	2057	4140752057	FC07514420571	Frozen	D		3.8	101	381	482
FMA9100029	2090	4140752090	FC07514420901	Frozen	D	Y	8.5	330	1573	1903
FMA9100029	2135	4140752135	FC07514421351	Frozen	D	Y	2.9	59	639	698
FMA9100029	2451	4150752451	FC07515424511	Frozen	D		8.9	292	1781	2073
FMA9100029	2958	4140752958	FC07514429581	Frozen	D	Y	13.4	537	2578	3115
FMA9100029	3011	4140753011	FC07514430111	Frozen	D		17.4	526	2855	3381
FMA9100029	2978	4150752978	FC07515429781	Frozen	D		6.6	363	965	1328
FMA9100029	3225	4150753225	FC07515432251	Frozen	D		6.6	253	845	1098
FMA9100029	3265	4150753265	FC07515432651	Frozen	D		10.4	817	1215	2032
FMA9100029	3463	4150753463	FC07515434631	Frozen	D		4.4	175	807	982
FMA9100029	0557	4150760557	FC07615405571	Frozen	D		7.5	256	1238	1495
FMA9100029	0990	4150760990	FC07615409901	Frozen	D		11.3	832	1448	2280
CTLL030047	2818	4150752818	NC07515428184	Frozen	C		8.0	1631	564	2194
CTLL030047	2918	4150752918	NC07515429184	Frozen	C		3.5	359	25	384
CTLL030047	2949	4150752949	NC07515429494	Frozen	C		3.5	575	195	770
CTLL030047	3362	4150753362	NC07515433624	Frozen	C		3.9	763	135	897
CTLL030047	3431	4150753431	NC07515434314	Frozen	C		1.1	139	14	153
CTLL030047	3460	4150753460	NC07515434604	Frozen	C		9.5	968	273	1241
CTLL030047	0208	4150760208	NC07615402084	Frozen	C		9.3	969	200	1168
CTLL030047	0226	4150760226	NC07615402264	Frozen	C		9.5	1542	514	2056
CTLL030047	0403	4150760403	NC07615404034	Frozen	C		27.0	4670	858	5527
CTLL030047	0543	4150760543	NC07615405434	Frozen	C		11.8	1241	570	1810
CTLL030047	0559	4150760559	NC07615405594	Frozen	C		2.9	413	75	488
CTLL030047	0993	4150760993	NC07615409934	Frozen	C		4.1	458	301	759
Total							1,075.0	119,439	76,082	195,521

SHS Variance Summary

Operator - NFPL

SR SHS Tracking between 2015 and 2025 (timber year)

PD 1, Year 1-10 PU: EMT (75144)

Harvest Profile					Planned for Harvest (ha)									Asbuilts					Combined As-Built & Planned					Unplanned							
					Variance					Harvested (ha)				SHS Assessment (Excluding Slivers)		Variance			SHS Assessment (Excluding Slivers)												
																					Substantial		Slivers								
Compartment	Company Specific Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS	Operator Approved FMP 10 Year SHS	SHS 1-10yr	SHS 11-20yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions	Deletions	Deferrals	Total	Additions	Deletions & Deferrals	Total	SHS 1-10yr	SHS 11-20yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested - 10yr FMP SHS	Additions	Deletions	Deferrals	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Remaining Available Area (SHS & Non-SHS)	unplanned SHS in Compartment
103-B	All	All	2,511	1,988	498	-	226	75	799	301	301	2	303	68	119	187	-	-	-	-	-	15.14%	(2)	(1,988)	301	301	2	15.14%	(2)	1,189	1,067
	Aw/AwU	D	524	1	-	-	3.00	5.70	8.69	8.7	-	-	-	4.6	-	4.6	-	-	-	-	-	670.37%	9	(1)	9	-	-	670.37%	9	(7)	1
	PjMX	DC-P	49	49	24.82	-	7.17	0.56	32.54	7.7	7.4	-	7.4	1.6	9.2	10.7	-	-	-	-	-	15.73%	0	(49)	8	7	-	15.73%	0	17	8
	AwSx	DC-S	249	249	65.81	-	0.44	23.80	90.04	24.2	75.3	-	75.3	4.3	16.0	20.3	-	-	-	-	-	9.73%	(51)	(249)	24	75	-	9.73%	(51)	159	92
	SxAw	CD-SW	242	242	86.13	-	0.12	5.35	91.60	5.5	51.8	-	51.8	0.2	11.5	11.7	-	-	-	-	-	2.26%	(46)	(242)	5	52	-	2.26%	(46)	150	92
	PjMx	CD-P	65	65	17.45	-	7.92	0.04	25.41	8.0	4.4	2.4	6.9	2.3	3.8	6.1	-	-	-	-	-	12.23%	1	(65)	8	4	2	12.23%	1	40	37
	SxAw	CD-SB	13	13	2.60	-	3.93	-	6.52	3.9	9.0	-	9.0	-	1.6	1.6	-	-	-	-	-	29.64%	(5)	(13)	4	9	-	29.64%	(5)	7	0
	Sw	C-SW	277	277	98.18	-	1.52	6.14	105.85	7.7	53.3	-	53.3	2.4	30.6	33.0	-	-	-	-	-	2.76%	(46)	(277)	8	53	-	2.76%	(46)	172	95
	Pj	C-P	748	748	173.10	-	53.46	6.73	233.29	60.2	79.6	-	79.6	9.6	28.5	38.1	-	-	-	-	-	8.05%	(19)	(748)	60	80	-	8.05%	(19)	514	467
	SbG	C-SB	343	343	30.20	-	16.78	23.64	70.61	40.4	20.1	-	20.1	11.4	18.2	29.7	-	-	-	-	-	11.77%	20	(343)	40	20	-	11.77%	20	273	275
	SBFM	C-SBFM	-	-	-	-	131.56	-	131.56	131.6	-	-	-	25.3	-	25.3	-	-	-	-	-	0.00%	132	-	132	-	-	0.00%	132	(132)	-
	X	NoStrata	-	-	-	-	0.32	2.90	3.22	3.2	-	-	-	6.0	-	6.0	-	-	-	-	-	0.00%	3	-	3	-	-	0.00%	3	(3)	-

Note: * Deletions and Deferrals to be provided in shapefile format for next FMP
Values may be affected by rounding

Planning Units Submitted with this Variance Calculation in order of latest to Oldest: 75144(EMT)

SHS Variance Summary

Operator: Al-Pac

SR SHS Tracking between 2015 and 2025 (timber year)
PD 1, Year 1-10

01/02/2019

Compartment	Harvest Profile					Planned for Harvest (ha)								Asbuilts					Combined As-Built & Planned			Unplanned										
						Variance				Harvested (ha)				SHS Assessment (Excluding Slivers)			Variance		SHS Assessment (Excluding Slivers)													
						Substantial		Slivers		Substantial		Slivers		SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)		Difference in Area Total Harvested - 10Yr FMP SHS	Substantial	SHS Assessment (Excluding Slivers)	Remaining Available Area (SHS & Non-SHS)												
Company Specific Yield Strata	Provincial Yield Strata	Approved DFA 10 Year SHS	Operator Approved FMP 10 Year SHS	Operator Approved FMP 10 Year SHS	SHS 1-10Yr	SHS 11-20Yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	Additions	Deletions	Deferrals	Total	Additions	Deletions & Deferrals	Total	SHS 1-10Yr	SHS 11-20Yr	Contributing Landbase Outside SHS	Non-Contributing Landbase	Total	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Difference in Area Total Harvested - 10Yr FMP SHS	Additions	Deletions	Deferrals	SHS Variance (Additions %)	Difference in Area (Subst. Add. - D&D)	Remaining Available Area (SHS & Non-SHS)	unplanned SHS in Compartment	
L03-B	All	All	2,511	523	159	-	13	7	179	20	165	57	222	29	59	88	-	-	-	-	-	3.87%	(202)	(523)	20	165	57	3.87%	(202)	344	83	
	Aw/AwU	D	524	523	159.14	-	2.59	-	161.72	2.6	164.8	57.0	221.8	4.3	59.3	63.6	-	-	-	-	-	0.49%	(219)	(523)	3	165	57	0.49%	(219)	361	83	
	PjMx	DC-P	49	-	-	-	7.53	-	7.53	7.5	-	-	-	1.7	-	1.7	-	-	-	-	-	0.00%	8	-	8	-	-	-	0.00%	8	(8)	-
	AwSx	DC-S	249	0	-	-	-	3.68	3.68	3.7	-	-	-	3.1	0.1	3.2	-	-	-	-	-	3273.20%	4	(0)	4	-	-	-	3273.20%	4	(4)	(0)
	SxAw	CD-SW	242	-	-	-	-	-	-	-	-	-	-	0.2	-	0.2	-	-	-	-	-	0.00%	-	-	-	-	-	-	0.00%	-	-	-
	PjMx	CD-P	65	-	-	-	-	-	-	-	-	-	-	0.3	-	0.3	-	-	-	-	-	0.00%	-	-	-	-	-	-	0.00%	-	-	-
	SxAw	CD-SB	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00%	-	-	-	-	-	-	0.00%	-	-	-
	Sw	C-SW	277	-	-	-	-	-	-	-	-	-	-	0.4	-	0.4	-	-	-	-	-	0.00%	-	-	-	-	-	-	0.00%	-	-	-
	Pj	C-P	748	-	-	-	-	-	-	-	-	-	-	3.0	-	3.0	-	-	-	-	-	0.00%	-	-	-	-	-	-	0.00%	-	-	-
	SbG	C-SB	343	-	-	-	3.38	3.38	3.4	-	-	-	-	4.3	-	4.3	-	-	-	-	-	0.00%	3	-	3	-	-	-	0.00%	3	(3)	-
	SBFM	C-SBFM	-	-	-	3.05	-	3.05	3.0	-	-	-	-	10.8	-	10.8	-	-	-	-	-	0.00%	3	-	3	-	-	-	0.00%	3	(3)	-
	X	NoStrata	-	-	-	-	-	-	-	-	-	-	-	1.0	-	1.0	-	-	-	-	-	0.00%	-	-	-	-	-	-	0.00%	-	-	-

Note: * Deletions and Deferrals to be provided in shapefile format for next FMP
Values may be affected by rounding

Planning Units Submitted with this Variance Calculation in order of latest to Oldest: 75144(EMT)