



Northland Forest Products Ltd.
and
Alberta Pacific Forest Industries
Inc.

Forest Harvest Plan

Planning Compartment:

091124 (Birchwood Creek)

FMA 9100029/CTLLA150003

Forest Harvest Plan- 091124-18-23

Date Submitted: **2019/01/18**

Forest Harvest Plan

PU091124 / Birchwood Creek

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Report

1.0 Introduction

Alberta – Pacific Forest Industries Inc. (Alberta – Pacific) and Northland Forest Products Ltd. (Northland) have prepared a Forest Harvest Plan (FHP) for the harvest of deciduous and coniferous stands within Planning Unit 091124.

Planning Unit 091124 is comprised of 52 proposed coniferous cutblocks and 49 proposed deciduous cutblocks with a total area of 1,737.7 ha, within Forest Management Unit (FMU) A15 .

The companies have identified two potential camp locations for logging operations within this planning unit. The temporary camps are located in block FB09212410811 (Lat 56.966077, Long -111.833199) and block FB09112426301 (Lat 56.916366, Long -111.821244), each with an area of 0.98 hectares and can be viewed in the FHP Overview Map. The campsites will be reclaimed as indicated in Section 11.3.4.4 of the Northeast Alberta Timber Harvesting Planning and Operating Ground Rules (OGRs).

Copies of this Forest Harvest Plan are available on the Alberta – Pacific website, at www.alpac.ca and at northlandforestproducts.com

2.0 General Planning Unit Information /Design Considerations

This FHP has been validated by Registered Forestry Professionals employed by Alberta-Pacific Forest Industries Inc.

This FHP includes maps and reports that clearly show and document the planned harvest area boundaries, roads and water crossings within the Planning Unit.

This plan is being submitted for appraisal, for a 5-year FHP approval under the 2018-19 Alberta-Pacific and Northland Annual Operating Plan (AOP).

2.1 Operating Ground Rules

Planning Unit 091124 has been designed in accordance with the Northeast Alberta Operating Ground Rules (OGRs), revised 2018. Alberta – Pacific is requesting certain deviations from the OGRs, due to field verified factors. These requests, along with corresponding information are listed under the section *OGR Deviations*.

3.0 Maps

Individual block maps have been included in the submission package, outlining the information pertinent to these blocks. A planning unit overview map and a Spatial

Harvest Sequence (SHS) planning unit map have been included in the submission package. These maps can be viewed in the *Appendices* of this document.

4.0 Block Information

A *Block Summary Table* has been included in Appendix A outlining the expected volumes of the area.

4.1 Utilization

Alberta – Pacific adheres to the 15/10 utilization standard for deciduous stands, and Northland adheres to 15/10 standard for coniferous stands. Northland plans to complete cut-to-length operations for the coniferous volume within this planning unit. These cut-to-length operations will adhere to the Alberta Log Scaling regulations and the Alberta Log Scaling Manual.

4.2 Field verification

The proposed blocks were ground verified by a field layout team. The layout team provided planning support to assess timber quality, sensitive and historical sites, operability of the harvest area, and classification of water courses within the planning unit boundary. Where applicable, the findings of the layout team have been noted in the corresponding section of this report.

4.3 Understory Assessment

White Spruce understory will be protected using high effort understory protection in stands identified as greater than 600 stems/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 amounting to 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 A - *Block Summary Table*.

4.4 Structure Retention

Alberta – Pacific will leave an average of 5% merchantable volume as structure retention throughout the FMU and Northland will leave an average of 3%. This retention will be left in the following methods:

- Laid out patches
- Mapped patches (planned with GIS desktop)

-
-
- Individual trees
 - Small clumps left at the operators' discretion

Retention areas are noted within Appendix B – *Retention Areas Table*.

4.5 Debris Management

Debris management of the planning unit will be accomplished in a manner consistent with Section 7.3 of the OGRs.

5.0 Watercourse Protection

Where harvest blocks are in proximity to any potential watercourses, the field layout team conducted field assessments utilizing the methodology and classification standards outlined in Section 6.0 of the OGRs. Any confirmed watercourses have been buffered in accordance with the OGRs Section 6.0, Table 2.

Alberta- Pacific's internal fish surveys has confirmed no presence of fish bearing watercourses.

Any deviations from the OGRs in relation to the watercourse buffers are noted in this report; please refer to the *OGR Deviations* section of the report for further information. The list of watercourse crossings can be found in Appendix C – *Watercourse Crossing Summary Table*.

6.0 Road Information

Overview maps have been attached showing roads in accordance with Section 3.4.6. of the OGRs; all spatial data requirements have also been included with this submission.

Roads will be constructed, maintained, and reclaimed in a manner consistent with Section 11.3 of the OGRs.

When new access is necessary, reclamation processes will adhere to Section 11.3.4 of the OGRs. To enable for silviculture activities, all-terrain vehicle (ATV) access may be left throughout the harvest area. The list of roads can be found in Appendix D – *Road Attributes Table*.

7.0 Land Use Information

A search of the Land Status Automated System (LSAS) and Digital Integrated Dispositions (DIDs) yielded active dispositions within the FHP harvest area. Any necessary agreements with the disposition holder will be in place prior to the commencement of harvest operations. None of the dispositions within the FHP harvest area will restrict harvest operations in the FHP.

The FHP design incorporates pipeline crossings, for temporary class 4 roads. The agreements will be in place prior to the construction of these crossing.

The following RDS is present in the FHP: RDS100051/RDS100054. This disposition is under “Application” status and Alberta-Pacific has contacted Alberta Transportation to notify of this FHP. Timber dispositions are exempt from any restrictions and Alberta Transportation confirmed no issue with operations on this RDS.

8.0 Integration with Other Forest Users

8.1 Integration with Other Harvest Operators

This is an integrated plan between the FMA holder and CTL holder; both companies have validated the plan.

8.2 Registered Fur Management Areas (RFMAs)

There are 5 RFMAs within the FHP who will be affected by operations. Notification letters were sent to the respective RFMA holders, any requests from any RFMA holder have been considered, and, where possible, the harvest design has been planned to accommodate the request.

Trapper Areas Table

RFMA ID	Notification Method	Contact Method
587	Letter	Mail
1790	Letter	Mail
2156	Letter	Mail
2676	Letter	Mail
2894	Letter	Mail

Table 1: Trapper Areas Table
RFMA holders affected by harvest operations.

8.3 Wildlife Management Unit(s) (WMU)

Planning Unit 091124 is location within WMU 518. The Guides and Outfitters operating within this unit have been sent notification, via registered mail, on the FHP design, as well as a timeline for the commencement of harvest operations. Any requests from Guides and Outfitters have been considered, and, where possible, the harvest design has been planned to accommodate the request.

8.4 Indigenous Groups

During the General Development Plan (GDP) process, Alberta – Pacific and Northland completes a consultation with indigenous groups every year. There have not been any issues identified for the planning unit 091124 FHP submission.

8.5 Other Forest Users

The following PNT is present in this FHP: PNT950266. This notation is held by the McMurray Sno-Drifters Association (snowmobile club). Alberta-Pacific has contacted the club and notified them of this FHP. This PNT is on top of Northland's DLO (DLO781246). There are several FHP roads that cross the and Alberta-Pacific and Northland will ensure the crossings have adequate signage during active operations to ensure the safety of all users. Once operations are completed, Alberta-Pacific and Northland will ensure the crossings are reclaimed to preserve the snowmobile trail.

8.6 Forest Aesthetics

As outlined in Section 5.5. of the OGRs, Alberta – Pacific and Northland follow the objective to mitigate the impact of timber operations on the visual quality of the forest landscape. This FHP is not adjacent to any park or recreational areas, and no other aesthetics concerns have been noted to date by other forest users. Alberta – Pacific and Northland will strategically locate retention areas adjacent to Class I, II, and III roads, minimizing line of sight where possible.

9.0 Species and Areas of Concern

9.1 Woodland Caribou

None of the planned cutblocks in this FHP are within mapped Caribou Ranges.

9.2 Key Wildlife and Biodiversity Zone (KWBZ)

None of the planned cutblocks in this FHP are within mapped KWBZ.

9.3 Other Species

All known sensitive wildlife sites have been buffered in accordance with Section 7.7.5.2 of the OGRs.

9.4 Sensitive Sites

A review of the block design and landscape of the FHP was completed by professional archaeologists. Any sites identified as being of high historical significance (historical resource sites), have been removed from the harvest design.

Upon completion of cutblock and road layout, a second review of the harvest blocks, and temporary class 4 roads is completed to identify potential conflicts, and to determine if any further changes are required to the planning unit.

There were no signs of rare plants, or diseases identified, including signs of terrestrial lichen.

If any sites are identified post submission, Alberta – Pacific and Northland will take the appropriate action to protect these sites.

9.5 Forest Health

During the field verification, a team evaluated the current state of the forest health in the FHP area, as outlined in Section 10.1 of the OGRs.

If any sites are identified post submission, Alberta – Pacific and Northland will take the appropriate action to protect these sites.

10.0 SHS Information / Variance Summary

Variances from the Spatial Harvest Sequence (SHS) within the Planning Unit boundary are shown in Appendix E - *Spatial Harvest Sequence Summary Table*.

11.0 Silviculture Information

No watercourse crossings will be left in for silviculture.

12.0 OGR Deviations

12.1 Road Deviations

The following table outlines the blocks which are greater than 7 hectares, with potentially more than 5% road disturbance.

Road Percent Deviations Table

Table 2: Road Percent Deviations Table

Road deviations which contain blocks that are greater than 7 hectares, with potentially more than 5% road disturbance.

Source ID	Opening Number	Road Percentage	Reasoning
<i>FB09013433791</i>	4130903379	6.26	Access to other blocks
<i>FB09013435431</i>	4130903543	5.13	Narrow/irregular block
<i>FB09111430161</i>	4110913016	5.02	Access to other blocks
<i>FB09112414381</i>	4120911438	5.44	Narrow/irregular block
<i>FB09112415221</i>	4120911522	5.96	Access to other blocks
<i>FB09112415471</i>	4120911547	5.23	Access to other blocks

<i>FB09112415781</i>	4120911578	7.24	Access to other blocks
<i>FB09112416051</i>	4120911605	5.39	Access to other blocks
<i>FB09112422261</i>	4120912226	6.89	Narrow/irregular block
<i>FB09112422321</i>	4120912232	6.28	Access to other blocks
<i>FB09112423011</i>	4120912301	5.04	Access to other blocks
<i>FB09112423511</i>	4120912351	5.07	Access to other blocks
<i>FB09112423881</i>	4120912388	6.16	Access to other blocks
<i>FB09112426251</i>	4120912625	6.21	Access to other blocks
<i>FB09112427681</i>	4120912768	7.46	Access to other blocks
<i>FB09113411821</i>	4130911182	8.63	Narrow/irregular block
<i>FB09212402281</i>	4120920228	5.32	Access to other blocks
<i>FB09212403471</i>	4120920347	6.08	Access to other blocks
<i>FB09212411641</i>	4120921164	6.26	Narrow/irregular block
<i>FB09212411961</i>	4120921196	6.01	Limited decking along main haul route

<i>FB09212414921</i>	4120921492	6.18	Access to other blocks
<i>FB09212415951</i>	4120921595	7.70	Narrow/irregular block

13.0 Validation by Registered Forest Practitioner

Plan prepared and submitted on behalf of Northland Forest Products Ltd and Alberta Pacific Forest Industries Inc.

Remi L'Heureux, RPF

ALBERTA-PACIFIC FOREST INDUSTRIES INC.

Darcy Sulz, RPF

NORTHLAND FOREST PRODUCTS LTD

Appendix A: Block Summary Table

Disposition	Source ID	Opening Number	Season	Landbase	Understorey Protection	Area (ha)	Deciduous Volume (m3)	Conifer Volume (m3)	Total Volume (m3)
FMA9100029	FB09013433791	4130903379	Frozen	D	Yes	31.6	5,892.1	2,235.1	8,127.2
FMA9100029	FB09013434221	4130903422	Frozen	D	Yes	116.4	19,299.7	4,831.1	24,130.7
FMA9100029	FB09013435431	4130903543	Frozen	D	Yes	35.4	6,124.8	1,799.2	7,924.1
FMA9100029	FB09013435991	4130903599	Frozen	D	Yes	33.7	5,254.0	2,343.9	7,597.9
FMA9100029	FB09013436391	4130903639	Frozen	D		3.2	581.8	205.5	787.4
FMA9100029	FB09111430161	4110913016	Frozen	C		11.6	1,435.5	1,654.1	3,089.6
FMA9100029	FB091112406151	4120910615	Frozen	D		2.2	262.1	29.1	291.2
FMA9100029	FB09112406391	4120910639	Frozen	D	Yes	4.7	1,108.9	180.8	1,289.7
FMA9100029	FB09112407251	4120910725	Frozen	D		25.7	1,082.8	556.2	1,639.0
FMA9100029	FB09112409981	4120910998	Frozen	C		5.2	257.5	960.3	1,217.8
FMA9100029	FB09112414381	4120911438	Frozen	D		17.7	3,412.4	930.0	4,342.4
FMA9100029	FB09112414411	4120911441	Frozen	C		19.4	1,673.6	3,227.3	4,900.9
FMA9100029	FB09112415051	4120911505	Frozen	D		4.0	611.3	216.5	827.8
FMA9100029	FB09112415221	4120911522	Frozen	D	Yes	15.1	2,529.7	1,105.3	3,635.0
FMA9100029	FB09112415431	4120911543	Frozen	C		19.9	1,121.8	3,765.3	4,887.0
FMA9100029	FB09112415471	4120911547	Frozen	C		29.5	3,121.5	4,349.0	7,470.5
FMA9100029	FB09112415491	4120911549	Frozen	D	Yes	7.6	1,029.6	665.7	1,695.2
FMA9100029	FB09112415781	4120911578	Frozen	D	Yes	12.0	2,017.4	940.8	2,958.3
FMA9100029	FB09112415991	4120911599	Frozen	C		2.5	283.3	350.0	633.3
FMA9100029	FB09112416051	4120911605	Frozen	D		13.8	2,246.6	1,474.4	3,721.0
FMA9100029	FB09112416341	4120911634	Frozen	C		19.7	1,203.4	3,697.5	4,900.9
FMA9100029	FB09112416621	4120911662	Frozen	D		11.5	1,656.5	1,092.9	2,749.4
FMA9100029	FB09112416931	4120911693	Frozen	C		9.3	804.8	1,674.8	2,479.6
FMA9100029	FB09112416951	4120911695	Frozen	D		5.1	656.8	300.1	956.8
FMA9100029	FB09112416991	4120911699	Frozen	C		46.9	4,207.2	6,298.7	10,505.8
FMA9100029	FB09112420701	4120912070	Frozen	C		18.0	596.2	4,099.7	4,695.9
FMA9100029	FB09112421401	4120912140	Frozen	D	Yes	20.8	3,648.3	1,117.6	4,765.9
FMA9100029	FB09112421851	4120912185	Frozen	D		3.6	455.8	406.6	862.4
FMA9100029	FB09112421991	4120912199	Frozen	C		3.1	184.2	283.2	467.4
FMA9100029	FB09112422261	4120912226	Frozen	C		28.5	987.0	4,214.1	5,201.1
FMA9100029	FB09112422321	4120912232	Frozen	D	Yes	21.3	3,659.1	1,465.1	5,124.2
FMA9100029	FB09112422461	4120912246	Frozen	D	Yes	23.0	4,019.3	1,382.5	5,401.8
FMA9100029	FB09112422541	4120912254	Frozen	C		4.1	350.3	569.1	919.4
FMA9100029	FB09112422821	4120912282	Frozen	D		36.7	6,170.2	5,093.9	11,264.1
FMA9100029	FB09112422861	4120912286	Frozen	C		24.8	1,415.0	4,908.4	6,323.4
FMA9100029	FB09112423011	4120912301	Frozen	D	Yes	20.2	3,101.5	843.8	3,945.2
FMA9100029	FB09112423381	4120912338	Frozen	C		17.7	915.2	3,525.1	4,440.2
FMA9100029	FB09112423511	4120912351	Frozen	C		7.7	389.8	1,591.5	1,981.3
FMA9100029	FB09112423621	4120912362	Frozen	D		6.4	1,131.1	439.5	1,570.6
FMA9100029	FB09112423881	4120912388	Frozen	C		14.2	1,065.3	2,363.8	3,429.2
FMA9100029	FB09112423891	4120912389	Frozen	D		6.8	1,106.8	1,153.9	2,260.7
FMA9100029	FB09112423931	4120912393	Frozen	C		7.4	417.7	1,205.8	1,623.4
FMA9100029	FB09112424071	4120912407	Frozen	D		22.3	4,050.3	1,434.1	5,484.4
FMA9100029	FB09112424461	4120912446	Frozen	D		7.0	1,011.6	491.1	1,502.6
FMA9100029	FB09112425471	4120912547	Frozen	D		8.1	1,434.9	505.9	1,940.8
FMA9100029	FB09112425841	4120912584	Frozen	C		3.5	345.1	521.5	866.6
FMA9100029	FB09112425941	4120912594	Frozen	D		70.8	14,230.2	4,436.3	18,666.6
FMA9100029	FB09112426251	4120912625	Frozen	D	Yes	14.7	2,136.3	1,276.8	3,413.1
FMA9100029	FB09112426301	4120912630	Frozen	D		29.3	5,015.2	1,791.5	6,806.6
FMA9100029	FB09112426591	4120912659	Frozen	D		25.3	4,453.6	1,120.5	5,574.0
FMA9100029	FB09112426631	4120912663	Frozen	D		5.8	944.5	246.6	1,191.1
FMA9100029	FB09112426671	4120912667	Frozen	D	Yes	25.7	4,384.5	1,382.4	5,767.0
FMA9100029	FB09112426961	4120912696	Frozen	C		82.4	6,710.1	12,477.6	19,187.8
FMA9100029	FB09112427121	4120912712	Frozen	C		6.1	180.2	1,169.9	1,350.1
FMA9100029	FB09112427561	4120912756	Frozen	C		6.1	255.3	1,251.6	1,507.0
FMA9100029	FB09112427681	4120912768	Frozen	C		12.1	573.9	2,332.0	2,905.9
FMA9100029	FB09112427911	4120912791	Frozen	C		3.0	96.3	614.2	710.5
FMA9100029	FB09112427961	4120912796	Frozen	C		4.1	191.3	459.7	651.0
FMA9100029	FB09112435621	4120913562	Frozen	D	Yes	118.2	20,248.2	6,128.1	26,376.3
FMA9100029	FB09113411821	4130911182	Frozen	D		11.2	1,724.6	1,026.6	2,751.2
FMA9100029	FB09113412181	4130911218	Frozen	D		6.4	1,005.8	517.6	1,523.4
FMA9100029	FB09113413301	4130911330	Frozen	D		3.4	672.7	260.3	933.0
FMA9100029	FB09113413341	4130911334	Frozen	D		7.6	2,084.5	64.5	2,149.0
FMA9100029	FB09212402211	4120920221	Frozen	D		4.6	945.6	301.2	1,246.8

FMA9100029	FB09212402281	4120920228	Frozen	C		8.9	585.7	1,513.5	2,099.2
FMA9100029	FB09212402491	4120920249	Frozen	C		3.3	339.2	422.5	761.6
FMA9100029	FB09212403031	4120920303	Frozen	D		6.2	1,011.5	510.6	1,522.1
FMA9100029	FB09212403471	4120920347	Frozen	C		10.5	605.7	1,846.2	2,451.9
FMA9100029	FB09212403981	4120920398	Frozen	D		13.3	2,412.6	693.7	3,106.2
FMA9100029	FB09212410811	4120921081	Frozen	C		26.9	1,680.6	5,250.1	6,930.6
FMA9100029	FB09212411221	4120921122	Frozen	C		25.8	1,365.1	4,794.1	6,159.2
FMA9100029	FB09212411281	4120921128	Frozen	D		5.0	873.5	244.3	1,117.7
FMA9100029	FB09212411641	4120921164	Frozen	C		24.3	1,397.0	4,378.3	5,775.2
FMA9100029	FB09212411791	4120921179	Frozen	D		19.7	3,527.7	1,189.2	4,716.9
FMA9100029	FB09212411841	4120921184	Frozen	D		6.7	1,004.7	637.6	1,642.4
FMA9100029	FB09212411961	4120921196	Frozen	D		10.5	1,229.4	400.6	1,630.0
FMA9100029	FB09212411981	4120921198	Frozen	C		2.5	143.4	466.0	609.4
FMA9100029	FB09212414841	4120921484	Frozen	D	Yes	19.2	3,655.2	887.6	4,542.8
FMA9100029	FB09212414921	4120921492	Frozen	C		9.2	526.4	1,734.6	2,261.0
FMA9100029	FB09212414961	4120921496	Frozen	D		31.8	5,888.2	936.5	6,824.7
FMA9100029	FB09212415951	4120921595	Frozen	C		24.5	1,623.4	3,896.0	5,519.4
FMA9100029	FB09212423491	4120922349	Frozen	D		18.4	-	-	-
FMA9100029	FB09212423991	4120922399	Frozen	D		6.4	-	-	-
CTLA150003	NB09013433664	4130903366	Frozen	C		26.6	1,406.2	5,767.5	7,173.7
CTLA150003	NB09013433934	4130903393	Frozen	C		3.1	530.1	363.6	893.6
CTLA150003	NB09013434184	4130903418	Frozen	C		4.5	227.5	619.0	846.5
CTLA150003	NB09013434314	4130903431	Frozen	C		2.9	217.2	479.5	696.8
CTLA150003	NB09013434454	4130903445	Frozen	C		3.1	286.1	495.9	781.9
CTLA150003	NB09013434724	4130903472	Frozen	C		20.5	1,699.3	2,756.0	4,455.2
CTLA150003	NB09013435554	4130903555	Frozen	C		4.1	381.7	612.1	993.8
CTLA150003	NB09013435874	4130903587	Frozen	C		4.5	303.1	384.8	688.0
CTLA150003	NB09112406294	4120910629	Frozen	C		12.9	644.4	2,661.4	3,305.7
CTLA150003	NB09112406384	4120910638	Frozen	C		7.7	320.3	1,690.8	2,011.1
CTLA150003	NB09112407444	4120910744	Frozen	C		2.0	72.9	271.8	344.7
CTLA150003	NB09112407744	4120910774	Frozen	C		9.9	543.0	1,068.0	1,610.9
CTLA150003	NB09113401764	4130910176	Frozen	C		23.3	945.7	4,974.6	5,920.3
CTLA150003	NB09113403314	4130910331	Frozen	C		9.4	393.3	2,126.5	2,519.8
CTLA150003	NB09113411504	4130911150	Frozen	C		6.6	511.7	701.0	1,212.7
CTLA150003	NB09113411864	4130911186	Frozen	C		35.8	3,199.7	5,983.4	9,183.1
CTLA150003	NB09113412594	4130911259	Frozen	C		22.7	1,858.5	4,154.1	6,012.6
CTLA150003	NB09113413924	4130911392	Frozen	C		7.5	361.7	1,382.6	1,744.2
Total						1725.6	211,954.0	185,650.6	397,604.6

Appendix B: Retention Areas Table

Retention ID	Source ID	Type	Deciduous Volume (m3)	Conifer Volume (m3)	Size (ha)
1	FB09111430161	Island	35.8	67.0	0.4
2	FB09112415431	Island	3,390.0	2,704.5	0.8
3	FB09112416991	Island	39.9	53.4	0.5
4	FB09112422321	Island	4,692.2	3,546.1	0.3
5	FB09112422541	Island	270.4	694.9	0.1
6	FB09112423381	Island	1,039.7	3,715.2	0.4
7	FB09112425941	Island	85.4	27.2	0.4
8	FB09112426301	Island	111.2	26.5	0.6
9	FB09112427911	Island	2.1	14.7	0.1
10	FB09212402281	Island	745.3	2,317.4	0.1
11	FB09212402491	Island	3.9	27.3	0.1
12	FB09212403981	Island	48.3	8.4	0.3
13	FB09212410811	Island	1,661.1	5,143.2	0.1
14	FB09212411791	Island	1,308.7	310.1	0.4
15	FB09212411981	Island	14.0	24.9	0.2
16	FB09212414921	Island	484.8	1,808.0	0.2
17	FB09212414961	Island	2,154.8	511.6	0.4
18	FB09212415951	Island	26.1	63.6	0.4
19	FB09212423491	Island	-	-	0.2
				Total	5.8

Appendix C: Watercourse Crossing Summary Table

Road ID	Crossing ID	Stream Class
DLO4466	1484	Ephemeral
RB09013433791A	0362	Small Permanent
RB09013433791A	0494	Ephemeral
RB09013433791A	0924	Ephemeral
RB09013433791A	0909	Ephemeral
RB09013434221B	2738	Ephemeral
RB09013434871A	3476	Ephemeral
RB09112407251A	0745	Ephemeral
RB09112415431B	1521	Intermittent
RB09112415471A	1517	Ephemeral
RB09112415471A	1527	Ephemeral
RB09112416051A	1695	Ephemeral
RB09112416051A	1595	Beaver Pond
RB09112416051A	1425	Intermittent
RB09112416991A	2201	Ephemeral
RB09112421851A	2194	Ephemeral
RB09112423511A	2360	Transitional
RB09112423881A	2692	Small Permanent
RB09112423881B	2382	Intermittent
RB09112424461A	2426	Intermittent
RB09112425941A	2556	Ephemeral
RB09112425941A	2557	Beaver Pond
RB09112425941A	2636	Ephemeral
RB09112425941A	2646	Ephemeral
RB09112425941A	2516	Ephemeral
RB09112425941C	2592	Small Permanent
RB09112425941E	3044	Small Permanent
RB09112426301A	2299	Intermittent
RB09112426591A	2669	Ephemeral
RB09112426591A	2668	Ephemeral
RB09112435621B	3555	Ephemeral
RB09112435621B	3566	Ephemeral
RB09112435621B	3567	Ephemeral
RB09112435621G	3587	Ephemeral
RB09113411504A	1208	Small Permanent
RB09113411504A	1181	Small Permanent
RB09113411504B	1150	Ephemeral
RB09113412594A	1332	Ephemeral
RB09113413924A	1394	Intermittent
RB09113413924A	1393	Ephemeral
RB09212402491A	3567	Ephemeral
RB09212403471A	0348	Small Permanent
RB09212411641A	1137	Intermittent

RB09212414841A	1486	Ephemeral
RB09212415951A	1593	Intermittent
RB09212415951A	1173	Small Permanent
RB09212423491A	2377	Ephemeral
RB09212423491C	2349	Ephemeral

Appendix D: Road Attributes Table

Road Name	Road Class	Season	Road Length (m)
DLO043478	4	F	679
DLO4466	4	F	8133
DLO4466	4	F	1261
DLO781246	4	F	1106
LOC091030	3	N	8670
LOC100634	4	F	7711
LOC830746	3	N	2884
PLA160530	4	F	427
RB09013433791A	4	F	5590
RB09013434221A	4	F	2934
RB09013434871A	4	F	1199
RB09013436391A	4	F	96
RB09112407251A	4	F	1226
RB09112407744A	4	F	1481
RB09112409981A	4	F	44
RB09112414411A	4	F	401
RB09112415471B	4	F	523
RB09112415781B	4	F	321
RB09112416051A	4	F	6419
RB09112416621A	4	F	425
RB09112416831A	4	F	273
RB09112421401A	4	F	178
RB09112421851A	4	F	535
RB09112422081A	4	F	3071
RB09112422321A	4	F	996
RB09112422861A	4	F	2576
RB09112423011A	4	F	521
RB09112423511A	4	F	390
RB09112423881A	4	F	3148
RB09112423881B	4	F	2399
RB09112424461A	4	F	787
RB09112425191A	4	F	219
RB09112425941A	4	F	4435
RB09112425941B	4	F	466
RB09112425941C	4	F	667
RB09112425941E	4	F	1147
RB09112426301A	4	F	1185
RB09112426301B	4	F	820
RB09112426301C	4	F	759
RB09112426591A	4	F	570
RB09112426591C	4	F	120
RB09112426961A	4	F	796

RB09112427471A	4	F	47
RB09112427681A	4	F	211
RB09112427911A	4	F	356
RB09112427941A	4	F	184
RB09112435621B	4	F	956
RB09113401764A	4	F	2920
RB09113411504A	4	F	1425
RB09113412594A	4	F	881
RB09113413924A	4	F	642
RB09113413924C	4	F	17
RB09212402211A	4	F	533
RB09212402211B	4	F	16
RB09212402281A	4	F	854
RB09212402491A	4	F	2227
RB09212403471A	4	F	1231
RB09212411281A	4	F	658
RB09212411641A	4	F	635
RB09212411791A	4	F	1509
RB09212414841A	4	F	3755
RB09212415951A	4	F	3459
RB09212423491A	4	F	944
RB09212423991A	4	F	2044

SHS Variance Summary

Operator: Al-Pac

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

01/17/2019

Harvest Profile	Planned for Harvest (ha)												Asbuilts						Combined As-Built & Planned						Unplanned						
	Variance												Harvested (ha)						SHS Assessment (Excluding Slivers)												
	Substantial						Slivers						Substantial						SHS Assessment (Excluding 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
A15-A	All	All	5,739	4,179	1,955	-	141	65	2,160	205	219	86	305	167	221	388	-	-	-	-	-	4.92%	(100)	(4,179)	205	219	86	4.92%	(100)	2,018	1,698
	Aw/AwU	D	3,375	3,375	1,376.56	-	91.06	31.16	1,498.78	122.2	108.3	56.3	164.6	67.0	136.1	203.1	-	-	-	-	-	3.62%	(42)	(3,375)	122	108	56	3.62%	(42)	1,876	1,698
	PjMX	DC-P	215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00%	-	-	-	-	-	-	-	-	-
	AwSx	DC-S	222	137	118.71	-	27.26	-	145.97	27.3	5.0	-	5.0	14.2	12.9	27.1	-	-	-	-	-	19.96%	22	(137)	27	5	-	19.96%	22	(9)	(0)
	SxAw	CD-SW	250	174	150.48	-	13.53	-	164.01	13.5	10.0	-	10.0	4.9	13.5	18.4	-	-	-	-	-	7.78%	4	(174)	14	10	-	7.78%	4	10	(0)
	PjMx	CD-P	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00%	-	-	-	-	-	-	-	-	-
	SxAw	CD-SB	4	4	1.41	-	-	-	1.41	-	-	-	-	1.0	2.6	3.6	-	-	-	-	-	0.00%	-	(4)	-	-	-	0.00%	-	3	(0)
	Sw	C-SW	854	489	307.84	-	8.97	-	316.82	9.0	95.3	30.2	125.5	36.1	55.6	91.7	-	-	-	-	-	1.84%	(117)	(489)	9	95	30	1.84%	(117)	172	(0)
	Pj	C-P	724	-	-	-	-	-	-	-	-	-	-	1.1	-	1.1	-	-	-	-	-	0.00%	-	-	-	-	-	0.00%	-	-	-
	SbG	C-SB	-	-	-	-	2.55	-	2.55	2.6	-	-	-	-	-	32.2	-	-	-	-	-	0.00%	3	-	3	-	-	0.00%	3	(3)	-
	SBFM	C-SBFM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00%	-	-	-	-	-	0.00%	-	-	-
	X	NoStrata	-	-	-	-	30.85	-	30.85	30.8	-	-	-	10.9	-	10.9	-	-	-	-	-	0.00%	31	-	31	-	-	0.00%	31	(31)	-

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: 91124, 91114

SHS Variance Summary

Operator - NFPL

SR SHS Tracking between 2015 and 2025 (timber year)

PD 1, Year 1-10 PU: 091124

Harvest Profile				Planned for Harvest (ha)										Asbuilts					Combined As-Built & Planned					Unplanned							
									Variance					Harvested (ha)					Variance			SHS Assessment									
									Substantial			Slivers							Substantial			Substantial			SHS Assessment (Excluding 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
A15-A	All	All	5,739	228	190	-	-	-	190	-	5	8	13	28	26	54	-	-	-	-	-	0.00%	(13)	(228)	-	5	8	0.00%	(13)	38	(0)
	Aw/AwU	D	3,375	-	-	-	-	-	-	-	-	-	-	6.1	-	6.1	-	-	-	-	-	0.00%	-	-	-	-	-	-	-	-	-
	PjMX	DC-P	215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00%	-	-	-	-	-	-	-	-	-
	AwSx	DC-S	222	18	16.66	-	-	-	16.66	-	-	-	-	6.8	1.3	8.0	-	-	-	-	-	0.00%	-	(18)	-	-	-	0.00%	-	1	(0)
	SxAw	CD-SW	250	6	5.79	-	-	-	5.79	-	-	-	-	0.4	0.3	0.7	-	-	-	-	-	0.00%	-	(6)	-	-	0.00%	-	0	(0)	
	PjMx	CD-P	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00%	-	-	-	-	0.00%	-	-	-	-
	SxAw	CD-SB	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00%	-	-	-	-	0.00%	-	-	-	-
	Sw	C-SW	854	204	167.13	-	-	-	167.13	-	4.9	7.6	12.5	9.4	24.0	33.5	-	-	-	-	-	0.00%	(13)	(204)	-	5	8	0.00%	(13)	37	(0)
	Pj	C-P	724	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	-	-	-	-	-	0.00%	-	-	-	-	0.00%	-	-	-	-
	SbG	C-SB	-	-	-	-	-	-	-	-	-	-	-	5.0	-	5.0	-	-	-	-	-	0.00%	-	-	-	-	0.00%	-	-	-	-
	SBFM	C-SBFM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00%	-	-	-	-	0.00%	-	-	-	-
	X	NoStrata	-	-	-	-	-	-	-	-	-	-	-	0.6	-	0.6	-	-	-	-	-	0.00%	-	-	-	-	0.00%	-	-	-	-
Note:				* Deletions and Deferrals to be provided in shapefile format for next FMP Values may be affected by rounding																											