

# **Planning Unit 086104**

## **Forest Harvest Plan**

### **1. Introduction**

This Forest Harvest Plan (FHP) for Planning Unit 086104 includes maps and reports that clearly show and document the planned harvest area boundaries, roads and water crossings within the planning unit. The information in the write up and tables will only include frozen blocks and roads – the maps will include both frozen and non-frozen blocks (the non-frozen blocks are for reference only).

The winter blocks for this plan are being submitted for appraisal, for a 5-year FHP approval under the 2014-15 Alberta-Pacific Forest Industries Inc. (Alberta-Pacific) Annual Operating Plan (AOP). The summer blocks are scheduled to be laid at a later date.

### **2. Planning Unit Specific Comments**

Planning Unit 086104 is located along Highway 63, west of Gregoire Lake.

The planning unit is located in Forest Management Unit (FMU) A14. Alberta-Pacific has rights to D and D(C) as deciduous landbase and DC, CD and C as shared coniferous landbase.

The harvest design utilizes the 2006 Spatial Harvest Sequence (SHS). The coniferous design (coniferous SHS) is shown for landbase integration purposes. Detailed coniferous block and road design, variances to the coniferous SHS and coniferous profile reporting will be completed by the coniferous operator during their planning process. The affected coniferous operator will the deciduous design.

#### **Integration**

This FHP is in FMU A14. A copy will be provided for review to Millar Western Forest Products Ltd. (MWI).

MWI holds active timber disposition CTLA140001 and CTLA14J003 within portions of this planning unit.

#### **Watershed**

The Hangingstone River, making up the east side of the planning unit boundary, has been surveyed as a fish bearing watercourse and is navigable. 2 secondary watercourses run along the west side and central areas of the planning unit – both these watercourses have been surveyed as fish bearing watercourses. All have been buffered accordingly.

## **Stand Structure**

An average of 5% of the merchantable volume will be left in as stand structure over the landscape. The structure will be left as layout patches, and as single trees and small clumps of timber at the operators' discretion.

## **Debris Management**

Some of the blocks in this unit are outside FireSmart Community Zones as identified by Alberta Environment and Sustainable Resource Development (ESRD). One or more of following debris management strategies apply for blocks within this planning unit:

- Methods described in the Forest and Prairie Protection Act and Regulations, and/or
- Thinly spread slash throughout the block, and/or
- Stump side processing.

The retention of debris piles will be utilized in addition to the above strategies, as per the Debris Disposal Policy included in the Northeast Alberta Operating Ground Rules (OGRs).

Blocks within FireSmart Community Zones will not utilize the retention of debris piles.

The deciduous utilization standard will be 15/10. The coniferous utilization standard will be 15/11.

## **Design Comments**

During the layout phase of this operation, Alberta-Pacific looked for signs of insect or disease infestations. There were no signs of insect or disease detected.

### 3. Block Information

The following table summarizes the frozen volumes within Alberta-Pacific's FHP blocks.

**Landbase Volume Summary**

<b>Company</b>	<b>Area (ha)</b>	<b>Decid (m3)</b>	<b>Conif (m3)</b>	<b>Inc Conif (m3)</b>	<b>Total (m3)</b>
Alberta-Pacific	289	64,938	257	5,930	71,125

The following blocks are outside a community FireSmart Zone. The piling of debris will be used as a method of slash abatement within these blocks:

- 08510407241
- 08510407441
- 08510407561
- 08510407771
- 08510408491
- 08510409281
- 08510410881
- 08510411761
- 08510414151
- 08510414321
- 08510414361
- 08510414851
- 08510415241
- 08510415321
- 08510415771
- 08510415861
- 08510416221
- 08510416661
- 08510416821
- 08510417621
- 08510423431
- 08511412851
- 08511435731

### Alberta-Pacific Deciduous First Entry Block Listing

(Values Affected by Rounding)

Source Id	Harvest Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
08509430371	F	INC		10	2,434	0	87	2,521
08509430481	F	INC		4	1,050	0	62	1,112
08509430681	F	INC		5	1,035	0	70	1,105
08509431331	F	INC		8	1,751	0	74	1,825
08509431421	F	INC		5	1,238	0	39	1,277
08509431521	F	INC	U	16	2,930	0	182	3,112
08509431941	F	INC		2	486	0	20	506
08509432561	F	INC		3	822	0	25	847
08509432671	F	INC		6	1,724	0	57	1,781
08509432761	F	INC		1	110	0	3	113
08510407241	F	INC		1	97	0	24	121
08510407441	F	INC		2	488	0	64	552
08510407561	F	INC		1	317	0	13	330
08510407771	F	INC		2	391	0	17	408
08510408491	F	INC		7	1,557	0	125	1,682
08510409281	F	INC		9	2,048	0	128	2,176
08510410881	F	INC		5	1,027	0	54	1,081
08510411761	F	INC		6	1,247	0	232	1,479
08510414151	F	INC		5	1,455	0	65	1,520
08510414321	F	INC		1	108	0	12	120
08510414361	F	INC		16	3,714	0	420	4,134
08510414851	F	INC		24	5,651	0	196	5,847
08510415241	F	INC		3	760	0	120	880
08510415321	F	CTL		12	2,677	129	327	3,133
08510415771	F	INC		4	876	0	37	913
08510415861	F	INC		4	788	0	77	865
08510416221	F	INC		4	979	0	60	1,039
08510416661	F	INC		3	749	0	31	780
08510416821	F	INC		20	3,551	0	468	4,019
08510417621	F	INC		4	872	0	32	904
08510423431	F	INC		4	1,022	0	65	1,087
08510423781	F	INC		11	2,275	0	427	2,702
08510423791	F	INC		24	5,108	0	567	5,675
08510425231	F	INC		4	964	0	172	1,136
08510425421	F	INC		1	279	0	23	302
08510425531	F	CTL		5	1,108	128	218	1,454
08510425631	F	INC		2	282	0	91	373
08510425741	F	INC		2	413	0	20	433

**Alberta-Pacific Deciduous First Entry Block Listing  
(Cont.)**

(Values Affected by Rounding)

<b>Source Id</b>	<b>Harvest Season</b>	<b>Conif Charge</b>	<b>Detail Plan</b>	<b>Area (ha)</b>	<b>Decid (m3)</b>	<b>Conif (m3)</b>	<b>Inc Conif (m3)</b>	<b>Total (m3)</b>
08510425771	F	INC		2	279	0	66	345
08510436981	F	INC		3	357	0	11	368
08511412851	F	INC		1	248	0	8	256
08511435731	F	INC		9	1,767	0	253	2,020
08609405131	F	INC		20	4,943	0	686	5,629
08609405431	F	INC		4	1,154	0	40	1,194
08609405521	F	INC		2	632	0	25	657
08610401871	F	INC		5	1,175	0	137	1,312
<b>Total</b>				<b>289</b>	<b>64,938</b>	<b>257</b>	<b>5,930</b>	<b>71,125</b>

The conifer within Blocks 08510415321 and 08510425531 have been assigned White Spruce cover type.

**Alberta-Pacific PHP Block Listing**

(Values Affected by Rounding)

<b>Source Id</b>	<b>Harvest Season</b>	<b>Conif Charge</b>	<b>Detail Plan</b>	<b>Area (ha)</b>	<b>Decid (m3)</b>	<b>Conif (m3)</b>	<b>Inc Conif (m3)</b>	<b>Total (m3)</b>
08509429281	N	INC		35	6,951	0	215	7,166
08509430741	N	INC	U	173	38,279	0	1,817	40,096
08509432431	N	INC	U	119	25,063	0	2,784	27,847
08510424651	N	INC		50	12,135	0	634	12,769
<b>Total</b>				<b>376</b>	<b>82,428</b>	<b>0</b>	<b>5,450</b>	<b>87,878</b>

These blocks will be laid out and harvested at a later date. They will be submitted for approval once layout.

#### **4. Access and Road Information**

Landuse agreements will be in place prior to use of any third party dispositions being used. Access to the planning unit is Highway 63.

##### **Planning Unit Temporary Road Information**

A high pressure pipeline runs directly through the planning unit on the north side of the highway. As this pipeline cannot be crossed with the temporary harvest roads, and there are safety concerns in putting approaches along Highway 63, there are 2 temporary harvest roads running parallel to each other in the central portion of the planning unit.

Existing access has been utilized where possible to minimize the clearing of new Right of Way (RoW).

New access and channelled watercourse crossings will be reclaimed in order to restrict access. All terrain vehicle (ATV) access may be left to facilitate silviculture activities.

New access and channelled watercourse crossings will be reclaimed as per Section 11.3.4 of the OGRs. Road reclamation and abandonment details are listed in the AOP when the blocks and roads are scheduled.

Crossing 0799 on road 08491 is a bridge on a beaver flooded area that spans 20 meters in width and is not exempt for the *Water Act*.

### Main Access and Crossings

Road No.	Class	Length (Km)	Construction Season	Crossing Location	Field Call	Navigability	
01871	4W	2.10	Frozen	0648		P	
05131	4W	2.18	Frozen	0661	I	T	U
				0691	I	T	U
05431	4W	0.06	Frozen				
05521	4W	0.47	Frozen	3248		P	
				3258		P	
				3259		P	
07241	4W	0.02	Frozen				
07441	4W	0.07	Frozen	0735	I	T	U
07561	4W	0.65	Frozen				
07771	4W	0.76	Frozen	0777	E	E	U
08491	4W	1.07	Frozen	0799	E	B	U
				1711	UM	E	U
09281	4W	0.74	Frozen	0965	E	E	U
10881	4W	1.03	Frozen				
11761	4W	0.67	Frozen				
12851	4W	0.40	Frozen	0715	E	T	U
14151	4W	0.54	Frozen				
14321	4W	0.64	Frozen				
14361	4W	2.47	Frozen	1426	I	SP	U
				1447	E	T	U
14851	4W	1.11	Frozen				
15241	4W	0.51	Frozen	1514	UM	T	U
15321	4W	2.09	Frozen				
15771	4W	0.55	Frozen	1588	I	I	U
15861	4W	0.16	Frozen				
16221	4W	1.15	Frozen	1622	I	LP	N
				1717	I	SP	U
16661	4W	0.67	Frozen	1643	P	SP	N
				1644	I	T	U
16821	4W	2.58	Frozen	1682	UM	E	U
17621	4W	0.61	Frozen	1742	E	E	U
23431	4W	0.41	Frozen	2332	I	T	U
				2343		P	
23781	4W	1.81	Frozen	2419	E	SP	U
				2531	UM	E	U
				2355	E	SP	U
				2367	E	T	U
23791	4W	1.28	Frozen	2357	E	SP	U
				2368	E	T	U
				2378	E	E	U
				2681	E	SP	U
				2692	UM	I	U
25231	4W	0.88	Frozen	2523	UM	E	U
				2533	E	SP	U
				2534	E	SP	U
				2554	E	E	U
25421	4W	0.43	Frozen	2542	UM	E	U

**Main Access and Crossings (Cont.)**

<b>Road No.</b>	<b>Class</b>	<b>Length (Km)</b>	<b>Construction Season</b>	<b>Crossing Location</b>	<b>Field Call</b>	<b>Navigability</b>
				2543	E	SP U
				2552	E	E U
25531	4W	1.53	Frozen	2564	UM	I U
				2576	E	SP U
				2586	E	T U
				2597	UM	T U
				3028	E	I U
				3038	E	E U
25631	4W	0.41	Frozen	2563	UM	E U
25741	4W	1.03	Frozen	2584	E	SP U
				2595	E	SP U
				3015	UM	E U
				3026	E	E U
25771	4W	0.49	Frozen	2577	UM	E U
				2578	E	I U
				2587	E	SP U
30371	4W	0.61	Frozen	3047	UM	E U
				3048	E	E U
				3058	UM	E U
30481	4W	0.94	Frozen	3049	E	I U
				3141		P
30681	4W	0.62	Frozen			
31331	4W	1.68	Frozen	3126	E	SP U
				3146	E	SP U
				3156		P
31421	4W	0.25	Frozen			
31521	4W	0.16	Frozen	3171	E	SP U
31941	4W	0.65	Frozen			
32561	4W	0.13	Frozen	3255		P
32671	4W	0.40	Frozen	3267		P
				3268		P
				3276		P
35731	4W	2.86	Frozen	3152		P
36981	4W	0.26	Frozen			
<b>Total Class 4W:</b>		<b>41.15</b>				
<b>Total Class 4S:</b>		<b>0.0</b>				
<b>Total Class 4P:</b>		<b>0.0</b>				



### Skid Trail Crossings

Road No.	Crossing Location	Base Info	Field Call	Navigability
15321	1532	UM	E	U
25531	2553	UM	E	U
31521	3196	E	T	U

In the above tables, possible “Field Call” channelled watercourse classifications are powerline (P), ephemeral (E), intermittent (I), transitional (T), small permanent (SP), large permanent (LP), lake < 4 ha (SL), lake ≥ 4 ha (LL) beaver pond (B), spring (S), saturated soils (SS) or no channelled watercourse (NW). The “Navigability” rating identifies channelled watercourse as being potentially navigable (N) or potentially unnavigable (U) based on the possibility of traveling the stream with a vessel. The “Field Call” channelled watercourse classifications in the above table are based on Table 1 of the OGRs at the time, and during the conditions, when layout was conducted.

**ACCESS MAP GOES HERE!!!**

## **5. Non Timber Values**

### **Public Involvement**

Copies of this harvest plan will be available for viewing at the Athabasca, Fort McMurray and Lac La Biche libraries, TimberNorth-Athabasca, the Alberta-Pacific Wabasca field office and the Alberta-Pacific mill site.

The Public Involvement for this plan was completed during the previous year's General Development Plan (GDP) review meetings.

No concerns have been identified through the public involvement process to date.

### **Aboriginal Consultation**

The Aboriginal Consultation for this plan was completed during the previous year's GDP review meetings.

No concerns have been identified through the Aboriginal Consultation process to date.



## Land Use

As per a Land Status Automated System (LSAS) land standing report dated October 23, 2014, the following disposition have been removed from the harvest design:

- DML070128
- MLL130145
- MSL102474
- DRS800130
- MLL140076
- MSL110500
- DRS850047
- MSL011115
- SMC140002
- ISP990008
- MSL043491
- SMC140013
- MLL040097
- MSL043497

The following dispositions have been reviewed and contain no restrictions for timber removal at this time and do not affect the harvest design: DRS070027, DRS790081, CNT 090030 and CNT 130049.

## Wildlife

A portion of this planning unit is within Caribou Range. Operations will adhere to the Alberta-Pacific wildlife plan submitted annually in the fall.

The following blocks have been buffered according to section 7.1.1 of the OGR's:

08509431331                      08510414361                      08510414851  
08509431941

Block 08510416541 was deleted due to operational concerns once the convergence buffer had been removed.

## *Access and Access Management*

This area has some significant back hauls on the north side of Highway 63. This was done in order to avoid crossing a high pressure pipeline and avoid constructing approaches onto Highway 63 – which caused fragmentation in the harvest design. Existing access has been utilized where possible to minimize the clearing of new RoW.

The following policies have been implemented to mitigate access management concerns:

- Temporary road systems will be “signed” as temporary and closed as soon as possible after the harvesting, hauling, and silviculture activities have been completed.

The following access control practices will also be implemented:

- Road systems will be signed as “Temporary Access - Logging in Progress.”

- If a significant delay occurs between harvesting and hauling, temporary access controls on roads will be utilized to prevent access by motorized vehicles. These controls may include the placement of logs on the road, snow berms, and/or removal of creek crossings
- Slash rollback at strategic points (such as at the ends of the block or at the junction of the temporary road and permanent road) will be completed as soon as possible after logging to discourage access by all terrain or four wheel drive vehicles.

Since the planning unit falls within a Caribou Range, the timing of operations will be completed as per the Alberta-Pacific Forest Management Plan (FMP) and OGR's.

## 6. Spatial Harvest Sequence Summary

The table below summarizes the variance (in area) from the SHS, for Alberta-Pacific harvesting. The variance exceeds the 20% allowable for acceptance under the OGRs. The primary causes for the variance are unmapped and increased watercourses that required buffers and/or increased buffers and landbase lost to other landuse dispositions. The high pressure pipeline corridor fragmented several stands resulting in small blocks that are not operationally sound to harvest. Effort has been made to minimize variance wherever feasible.

<b>SHS Tracking</b>					
<b>SHS Tracking</b>	<b>Decid. Cover Type</b>	<b>Sw Cover Type</b>	<b>Sb Cover Type</b>	<b>Pj Cover Type</b>	<b>Total Cover Type</b>
Total SHS in Planning Unit	371.1	0.0	0.0	0.0	371.1
FHP SHS Harvest ha.	163.2	0.0	0.0	0.0	163.2
Deleted SHS ha. (reportable)	128.5	0.0	0.0	0.0	128.5
Deferred SHS ha. (reportable)	23.4	0.0	0.0	0.0	23.4
Variance % <sup>(1)</sup> (reportable)	40.9%	0.0%	0.0%	0.0%	40.9%
Addition ha.	86.7	0.0	0.0	0.0	86.7
Bypassed ha.	0.1	0.0	0.0	0.0	0.1
Total Harvest ha. <sup>(2)</sup>	249.9	0.0	0.0	0.0	249.9

(1) Variance % is the Deleted and Deferred SHS ha. expressed as a percentage of the Total SHS in the Planning Unit.

(2) Total Harvest ha. is the sum of FHP SHS Harvest ha. and Additions ha.

## Silviculture Information

The following table outlines the initial silviculture declarations for FHP blocks within Planning Unit 086104. Cover group balanced declarations will be submitted post harvest.

### Alberta-Pacific Silviculture Declarations

Source Id	Area (ha)	Std_ Mod	Open_ Desig	Species_ Gr	Silv_ Harv
08509430371	9.6	D	AV	DE	CC
08509430481	4.1	D	CC	DE	CC
08509430681	4.9	D	AV	DE	CC
08509431331	7.5	D	CC	DE	CC
08509431421	5.0	D	AV	DE	CC
08509431521	16.0	D	PC	DE	UP
08509431941	2.1	D	CC	DE	CC
08509432561	3.1	D	CC	DE	CC
08509432671	6.2	D	CC	DE	CC
08509432761	0.4	D	CC	DE	CC
08510407241	0.8	D	AV	DE	CC
08510407441	2.3	D	CC	DE	CC
08510407561	1.4	D	CC	DE	CC
08510407771	1.7	D	CC	DE	CC
08510408491	6.7	D	AV	DE	CC
08510409281	9.0	D	CC	DE	CC
08510410881	4.7	D	CC	DE	CC
08510411761	5.7	D	CC	DE	CC
08510414151	5.1	D	CC	DE	CC
08510414321	0.6	D	CC	DE	CC
08510414361	15.7	D	CC	DE	CC
08510414851	23.7	D	CC	DE	CC
08510415241	3.3	D	CC	DE	CC
08510415321	12.2	D	CC	DE	CC
08510415771	3.7	D	CC	DE	CC
08510415861	3.8	D	CC	DE	CC
08510416221	4.2	D	CC	DE	CC
08510416661	2.9	D	CC	DE	CC
08510416821	19.8	D	CC	DE	CC
08510417621	3.7	D	CC	DE	CC
08510423431	4.1	D	CC	DE	CC
08510423781	10.8	D	AV	DE	CC
08510423791	23.5	D	CC	DE	CC
08510425231	4.2	D	CC	DE	CC

**Alberta-Pacific Silviculture Declarations (Cont.)**

<b>Source Id</b>	<b>Area (ha)</b>	<b>Std_ Mod</b>	<b>Open_ Desig</b>	<b>Species_ Gr</b>	<b>Silv_ Harv</b>
08510425421	1.1	D	CC	DE	CC
08510425531	5.3	D	AV	DE	CC
08510425631	2.0	D	CC	DE	CC
08510425741	1.6	D	AV	DE	CC
08510425771	2.0	D	CC	DE	CC
08510436981	3.0	D	AV	DE	CC
08511412851	1.4	D	AV	DE	CC
08511435731	8.6	D	CC	DE	CC
08609405131	19.6	D	CC	DE	CC
08609405431	4.2	D	CC	DE	CC
08609405521	2.4	D	CC	DE	CC
08610401871	5.4	D	AV	DE	CC

In the above table, the codes for “Std\_Mod”, “Open\_Type”, “Species\_Gr” and “Silv\_Harv” are as per the Alberta Regeneration Information System (ARIS) domain codes. “AV” under “Open\_Desig” is not an ARIS code but is used internally for the tracking of understorey avoidance blocks. If a block contains adequate amounts of Balsam Fir, so that fir is an acceptable coniferous regeneration species, a code of FA is used in the “Species\_Gr”.

All deciduous blocks will be Leave for Natural (LFN). All coniferous blocks will be treated as per Appendix 4, of the FMP.



## 7. OGRs Variances

### Blocks

#### SHS Tracking

SHS Tracking	Decid. Cover Type	Sw Cover Type	Sb Cover Type	Pj Cover Type	Total Cover Type
Total SHS in Planning Unit	371.1	0.0	0.0	0.0	371.1
FHP SHS Harvest ha.	163.2	0.0	0.0	0.0	163.2
Deleted SHS ha. (reportable)	128.5	0.0	0.0	0.0	128.5
Deferred SHS ha. (reportable)	23.4	0.0	0.0	0.0	23.4
Variance % <sup>(1)</sup> (reportable)	40.9%	0.0%	0.0%	0.0%	40.9%
Addition ha.	86.7	0.0	0.0	0.0	86.7
Bypassed ha.	0.1	0.0	0.0	0.0	0.1
Total Harvest ha. <sup>(2)</sup>	249.9	0.0	0.0	0.0	249.9

- (1) Variance % is the Deleted and Deferred SHS ha. expressed as a percentage of the Total SHS in the Planning Unit.  
(2) Total Harvest ha. is the sum of FHP SHS Harvest ha. and Additions ha.

The following table identifies blocks greater than 7.0 ha that may exceed 5% road disturbance once turnabouts are constructed.

#### Road Percent

Source Id	% Road Class	Comments
08509431521	5	Extra roading required to reduce skid distance to another independent area of the block.
08510409281	7	Narrow block and/or irregular shaped block.
08510414361	8	Narrow block and/or irregular shaped block.
08510414851	5	Narrow block and/or irregular shaped block.
08510416821	6	Extra road required; access to other blocks.
08510423781	7	Narrow block and/or irregular shaped block.
08511435731	5	Irregular shaped block.
08609405131	5	Extra road required; Access to other blocks.

The percent road class values have been achieved by rounding the road disturbance percent to the nearest whole number.

Block 08510423781 is greater than 10ha and contains >2 ha clumps of  $\geq 600$  stems/ha of White Spruce understorey. However, the block has been fragmented into 4 independent pieces, none of which are greater than 10 hectares. This block will not have high intensity understorey protection and will be harvested using avoidance methods.

The following blocks contain  $\geq 600$  stems/ha of White Spruce understorey but are too narrow or small for high intensity understorey protection methods, and will have the understorey protected by avoidance:

08509430371	08510408491	08510436981
08509430681	08510423781	08511412851
08509431421	08510425531	08610401871
08510407241	08510425741	

No understorey assessments will be submitted for these blocks.

## Roads

### Road Comments

Road No.	Class	Comments
31331	4W	This road is within 200m of a lake.
36981	4W	This road is within 200m of a lake.