

Planning Unit 084174

Forest Harvest Plan

1. Introduction

This Forest Harvest Plan (FHP) for Planning Unit 084174 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 acceptance for a 5-year Forest Harvest Plan FHP approval under the 2013-14 Alberta-Pacific Forest Industries Inc. (Alberta-Pacific) Annual Operating Plan (AOP).

This FHP has been discussed with Alberta Environment and Sustainable Resource Development (ESRD). This plan was initially laid out under the 2004 AOP and any updates made in the field to comply with the 2012 Northeast Operating Ground Rules (OGRs) or Alberta-Pacific standards will be submitted as amendments in a reasonable time period.

2. Planning Unit Specific Comments

Planning Unit 084174 is located west of the Grand Rapids Wildland Provincial Park.

The planning unit is located in Forest Management Unit (FMU) A14 and L3. Alberta-Pacific has rights to D and D(C) as deciduous landbase and DC, CD and C as shared coniferous landbase in A14 and D and D(C) as deciduous landbase in L3.

The layout blocks were pre-blocked into the 2006 Spatial Harvest Sequence (SHS) as they were originally laid out in 2002/2003.

Integration

This FHP is in FMU A14 and L3 and will be provided for review to Millar Western Forest Products Ltd (Millar Western).

Alberta-Pacific has received their agreement for this plan.

Watershed

The Athabasca River slope break/Grand Rapids Provincial Park boundary/Forest Management Agreement (FMA) Boundary forms the east boundary of the planning unit and slope breaks were used to form the north boundary

The Athabasca River has been surveyed as a fish bearing watercourse.

Stand Structure

An average of 5% of the merchantable volume will be left in 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

All 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 may also be utilized in addition to the above strategies, as per Forest Protection Directive 2007-02.

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. No signs were found.

3. Block Information

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

Landbase Volume Summary

Company	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
Alberta-Pacific	1,506	269,367	69,838	30,217	369,421

Blocks 08417402761 and 08417409731 will have their coniferous volume hauled as FMA A14 primary coniferous.

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)
08317427381	F	INC		36	7,832	0	945	8,777
08317432291	F	INC	U	12	2,613	0	110	2,723
08317434811	F	INC	U	6	1,102	0	175	1,277
08317434991	F	INC		6	1,353	0	390	1,743
08317435371	F	INC		7	1,662	0	305	1,967
08317435641	F	INC	U	16	3,153	0	374	3,527
08317435791	F	INC		9	1,719	0	706	2,425
08318434741	F	INC		11	2,416	0	628	3,044
08318435171	F	INC		2	456	0	66	522
08417402111	F	INC		5	909	0	202	1,111
08417402341	F	INC		17	4,673	0	477	5,150
08417402761	F	FMA		70	11,217	3,888	2,171	17,276
08417403741	F	INC		6	710	0	572	1,282
08417404251	F	INC	U	27	4,783	52	848	5,683
08417404751	F	INC	U	38	7,462	311	1,562	9,335
08417405321	F	INC	U	2	443	0	14	457
08417408471	F	INC		29	6,910	300	389	7,599
08417409221	F	INC		12	3,028	0	225	3,253
08417409731	F	FMA		27	4,747	371	1,351	6,469
08417409941	F	INC	U	5	1,346	0	163	1,509
08417410581	F	INC		24	5,494	0	691	6,185
08417411251	F	INC		29	6,703	168	677	7,548
08417411391	F	INC		9	2,225	0	145	2,370
08417415471	F	INC		18	3,194	0	330	3,524
08417416471	F	INC		7	1,691	0	93	1,784
08417416971	F	INC		57	9,358	194	718	10,270

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

(Values Affected by Rounding)

Source Id	Harvest Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
08417420211	F	INC	U	7	571	114	517	1,202
08417420951	F	INC		74	14,080	1,270	2,538	17,816
08417429451	F	INC	U	45	9,580	0	871	10,451
08417431491	F	INC		32	8,474	0	549	9,023
08417431691	F	INC		14	3,067	64	570	3,701
08417432351	F	INC		42	7,191	0	1,284	8,475
08417433541	F	INC		72	13,797	63	962	14,822
08418401441	F	INC		14	3,795	0	311	4,106
08418401591	F	INC		42	10,231	0	511	10,742
08418402241	F	INC		22	5,922	0	184	6,106
08418402551	F	INC		25	6,482	0	704	7,186
08418402631	F	INC		5	1,149	0	128	1,277
08418403161	F	INC	U	4	865	0	132	997
08418403671	F	INC		73	18,147	224	863	19,234
08418403821	F	INC		55	14,549	0	904	15,453
08418404541	F	INC		18	3,453	287	1,076	4,816
08418404841	F	INC	U	41	7,913	313	1,336	9,562
08418435251	F	INC		35	8,631	0	279	8,910
08418435281	F	INC		41	9,491	0	776	10,267
08418435861	F	INC	U	19	3,011	98	1,123	4,232
08418436681	F	INC		18	3,106	385	335	3,826
08518401311	F	INC		12	2,881	0	349	3,230
Total				1,201	253,513	8,102	30,629	292,244

The conifer within Blocks 08417402761 and 08417409731 have been assigned White Spruce cover type.

**Alberta-Pacific Coniferous First Entry Block Listing –
White Spruce**

(Values Affected by Rounding)

Source Id	Harvest Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
08417401221	F	FMA		27	846	4,690	13	5,549
08417402221	F	FMA		5	249	1,107	0	1,356
08417402511	F	FMA		9	369	2,143	0	2,512
08417403851	F	FMA		45	1,935	9,461	49	11,445
08417404551	F	FMA		26	3,401	4,187	8	7,596
08417410781	F	FMA		61	2,909	13,420	0	16,329
08417416461	F	FMA		16	1,146	3,033	0	4,179
08417420681	F	FMA		38	2,383	7,542	12	9,937
08417431481	F	FMA		16	1,571	2,706	15	4,292
08418435551	F	FMA		18	692	3,272	0	3,964
08418436221	F	FMA		53	2,489	10,256	14	12,759
08518403831	F	FMA		3	458	195	0	653
Total				317	18,448	62,012	111	80,571

4. Access and Road Information

Landuse agreements will be in place prior to use of any third party dispositions being used.

Planning Unit Temporary Road Information

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.

Main Access and Crossings

Road No.	Class	Length (Km)	Construction Season	Crossing Location	Field Call	Navigability
01221	4W	0.11	Frozen			
01311	4W	1.77	Frozen			
01441	4W	1.31	Frozen	0272	I	U
01591	4W	3.66	Frozen	1243	E	U
02221	4W	0.1	Frozen			
02241	4W	1.27	Frozen			
02341	4W	1.21	Frozen			
02511	4W	0.08	Frozen			
02551	4W	1.34	Frozen	0253		
				0255	I	U
				0275	E	U
02631	4W	0.02	Frozen	0263		
02761	4W	3.54	Frozen	0235		
03161	4W	1.3	Frozen			
03671	4W	2.82	Frozen			
03741	4W	0.12	Frozen			
03821	4W	1.25	Frozen			
03831	4W	9.54	Frozen	0212	E	U
				1023	I	U
				1034	E	U
				1043	I	U
				1065		
				3464	E	U
03851	4W	0.39	Frozen			
04251	4W	0.43	Frozen	0427	E	U
04541	4W	0.73	Frozen			
04551	4W	2.87	Frozen	0445		
04751	4W	1	Frozen			
04841	4W	1.41	Frozen			

Main Access and Crossings (Cont.)

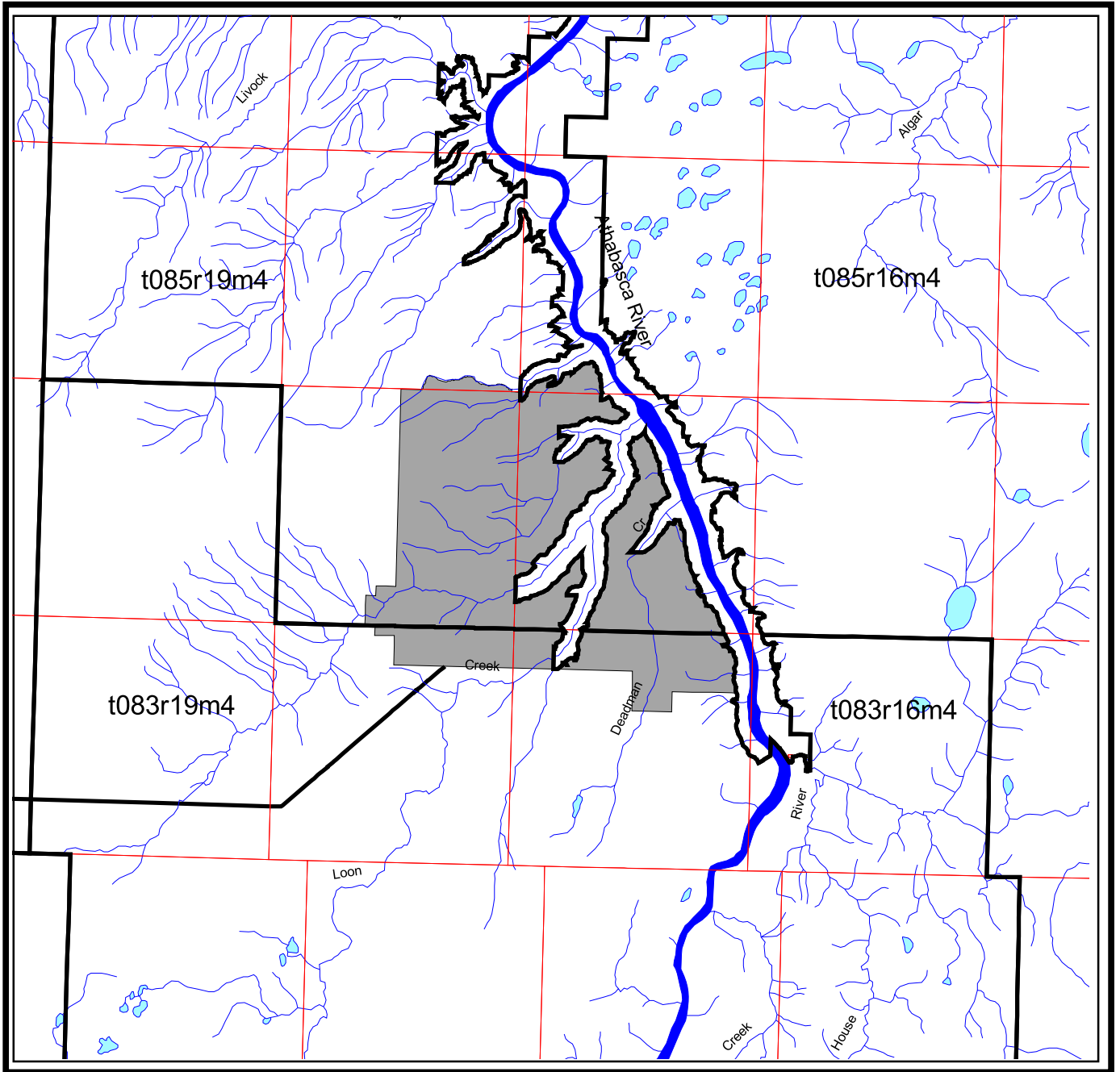
Road No.	Class	Length (Km)	Construction Season	Crossing Location	Field Call	Navigability
08471	4W	4.49	Frozen	0538 3144	I E	U U
09221	4W	0.39	Frozen			
09731	4W	0.14	Frozen	0954 0964	E E	U U
09941	4W	0.38	Frozen			
10581	4W	0.85	Frozen			
10781	4W	1.08	Frozen			
11251	4W	1.98	Frozen			
11391	4W	0.89	Frozen	1146	I	U
15471	4W	0.81	Frozen	0969	I	U
16461	4W	0.62	Frozen			
16971	4W	3.66	Frozen	0955	E	U
20211	4W	5.35	Frozen	1169 1464 1867	E E SP	U U U
20951	4W	3.06	Frozen			
27381	4W	0.99	Frozen			
29451	4W	1.5	Frozen			
31481	4W	1.71	Frozen			
31691	4W	1.14	Frozen	3137	I	U
32291	4W	0.33	Frozen			
32351	4W	1.37	Frozen	3236 3255	I E	U U
33541	4W	0.57	Frozen			
34741	4W	0.44	Frozen			
34811	4W	0.93	Frozen			
34991	4W	0.71	Frozen			
35171	4W	1.59	Frozen			
35251	4W	1.25	Frozen	3475	E	U
35281	4W	0.5	Frozen			
35371	4W	5.12	Frozen	3261 3456	E I	U U
35551	4W	0.66	Frozen			
35641	4W	0.54	Frozen			
35791	4W	0.98	Frozen			
35861	4W	0.07	Frozen	3575	E	U
36221	4W	4.24	Frozen	2625 2626 2635 2636	E I I E	U U U U
36681	4W	0.81	Frozen	0161 3659	E E	U U
Total Class 4W:		85.42				
Total Class 4S:		0.0				
Total Class 4P:		0.0				

In the above tables, possible “Field Call” channelled watercourse classifications are 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.

Planning Unit 084174

Access Map



1:250000



Alberta-Pacific
Forest Industries Inc.



5. Non Timber Values

Public Involvement

The Public Involvement for this plan was completed during the previous year's 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.

Trappers

The holders of the following Registered Fur Management Areas (RFMA) have been contacted regarding harvesting activities within Planning Unit 084174:

- 0602
- 1865

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

Guides and Outfitters

The holders of the following permits within Wildlife Management Unit (WMU) 518 will be notified of Alberta-Pacific's harvest plans within Planning Unit 084174:

- | | | |
|--------|--------|--------|
| - 0163 | - 0850 | - 0995 |
| - 0401 | - 0872 | - 1034 |
| - 0709 | - 0881 | - 1137 |
| - 0834 | - 0956 | |

No concerns have been identified through the Guide and Outfitter Consultation process to date.

Forest Recreation Groups

There are currently no active forest recreation groups with interests within this planning unit.

Grazing Lease Operators

There are currently no grazing leases within this planning unit.

Historical Resources

Areas of historical significance have been identified within this planning unit. These areas have been noted and will be removed from the blocks during the re-ribboning phase, prior to harvest.

Forest Aesthetics

There are no forest aesthetics concerns within this planning unit.

Land Use

A review of land use restrictions on this planning unit was completed on November 18, 2013. No dispositions were found within this planning unit that restrict harvesting timber.

Wildlife

This planning unit is within key Caribou Zones. Portions of the planning unit are within a key Wildlife and Biodiversity Zone. Operations will adhere to the Alberta-Pacific wildlife plan submitted annually in the fall.

Access and Access Management

Existing access has been utilized where possible to minimize the clearing of new RoW.

Continuous flow roads have been designed to reduce the amount of two-way traffic through certain areas of the planning unit (i.e. Road 03671).

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 key Caribou Zone, the timing of operations will be completed as per the Alberta-Pacific Forest Management Plan (FMP) and OGR's.

The access to this unit requires an extensive freeze down, consequently, Alberta-Pacific is requesting an extension to the January 15 deadline for operations within the Key Wildlife and Biodiversity Zone. This extension will allow Alberta-Pacific to complete operations in one season and avoid reopening the north access in 2014-15.

6. Spatial Harvest Sequence Summary

The table below summarizes the variance (in area) from the SHS, for Alberta-Pacific harvesting.

SHS Tracking					
SHS Tracking	Decid. Cover Type	Sw Cover Type	Sb Cover Type	Pj Cover Type	Total Cover Type
Total SHS in Planning Unit	1,045.2	580.8	26.7	68.8	1,721.5
FHP SHS Harvest ha.	1,003.0	538.5	23.4	65.4	1,630.3
Deleted SHS ha. (reportable)	33.5	119.0	0.3	0.3	153.1
Deferred SHS ha. (reportable)	9.4	39.5	21.9	44.7	115.5
Variance % (1) (reportable)	5.2%	21.4%	45.4%	39.5%	15.6%
Addition ha.	90.3	223.6	20.5	18.3	352.7
Bypassed ha.	0.0	0.0	0.0	0.0	0.0
Total Harvest ha. (2)	1,093.3	762.1	44.0	83.7	1,983.0

(1) Variance % is the Deleted and Deferred SHS ha. expressed as a percentage of the FHP SHS Harvest, the Deleted and Deferred SHS ha.

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

7. Silviculture Information

The following table outlines the initial silviculture declarations for FHP blocks within Planning Unit 084174. Cover group balanced declarations will be submitted post harvest.

Alberta-Pacific Silviculture Declarations

Source Id	Area	Std_	Open_	Species_	Silv_
	(ha)	Mod	Desig	Gr	Harv
08417401221	26.9	C	CC	SW	CC
08417402111	4.9	D	CC	DE	CC
08417402221	4.7	C	CC	SW	CC
08417402341	17.5	D	CC	DE	CC
08417402511	9.2	C	CC	SW	CC
08417402761	70.0	D	CC	DE	CC
08417403741	6.2	D	CC	DE	CC

Alberta-Pacific Silviculture Declarations (Cont.)

Source Id	Area	Std_	Open_	Species_	Silv_
	(ha)	Mod	Desig	Gr	Harv
08317427381	36.4	D	CC	DE	CC
08317432291	11.8	D	PC	DE	UP
08317434811	5.6	D	PC	DE	UP
08317434991	6.3	D	CC	DE	CC
08317435371	7.4	D	CC	DE	CC
08317435641	16.4	D	PC	DE	UP
08317435791	8.9	D	CC	DE	CC
08318434741	11.2	D	CC	DE	CC
08318435171	2.1	D	CC	DE	CC
08417403851	45.1	C	CC	SW	CC
08417404251	27.0	D	PC	DE	UP
08417404551	26.3	CD	CC	MX	CC
08417404751	38.4	D	PC	DE	UP
08417405321	2.3	D	PC	DE	UP
08417408471	28.7	D	CC	DE	CC
08417409221	12.1	D	CC	DE	CC
08417409731	26.7	D	CC	DE	CC
08417409941	5.0	D	CC	DE	CC
08417410581	24.2	D	CC	DE	CC
08417410781	61.3	C	CC	SW	CC
08417411251	28.9	D	CC	DE	CC
08417411391	8.9	D	CC	DE	CC
08417415471	17.7	D	CC	DE	CC
08417416461	15.7	CD	CC	MX	CC
08417416471	7.5	D	CC	DE	CC
08417416971	56.8	D	CC	DE	CC
08417420211	7.1	D	PC	DE	UP
08417420681	38.3	C	CC	SW	CC
08417420951	62.9	D	CC	DE	CC
08417429451	44.9	D	PC	DE	UP
08417431481	15.8	C	CC	SW	CC
08417431491	32.2	D	CC	DE	CC
08417431691	13.6	D	CC	DE	CC
08417432351	42.5	D	CC	DE	CC
08417433541	72.3	D	CC	DE	CC
08418401441	14.1	D	CC	DE	CC
08418401591	41.8	D	CC	DE	CC
08418402241	22.4	D	CC	DE	CC
08418402551	25.1	D	CC	DE	CC
08418402631	5.4	D	CC	DE	CC

Alberta-Pacific Silviculture Declarations (Cont.)

Source Id	Area	Std_	Open_	Species_	Silv_
	(ha)	Mod	Desig	Gr	Harv
08418403161	4.4	D	PC	DE	UP
08418403671	73.0	D	CC	DE	CC
08418403821	54.5	D	CC	DE	CC
08418404541	18.5	D	CC	DE	CC
08418404841	41.4	D	PC	DE	UP
08418435251	34.9	D	CC	DE	CC
08418435281	40.8	D	CC	DE	CC
08418435551	17.9	C	CC	SW	CC
08418435861	18.5	D	PC	DE	UP
08418436221	52.6	C	CC	SW	CC
08418436681	17.7	D	CC	DE	CC
08518401311	12.1	D	CC	DE	CC
08518403831	2.9	D	CC	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) unless required for incidental coniferous replacement in which case they will be treated as per Appendix 4 of Alberta-Pacific Forest Management Plan (FMP). All coniferous blocks will be treated as per Appendix 4, of the FMP.

8. OGRs Variances

Blocks

The lake bordering the northeast boundary of Block 27381 is less than 4.0 hectares in size and a 30 metre buffer has utilized.

SHS Tracking

SHS Tracking	Decid. Cover Type	Sw Cover Type	Sb Cover Type	Pj Cover Type	Total Cover Type
Total SHS in Planning Unit	1,045.2	580.8	26.7	68.8	1,721.5
FHP SHS Harvest ha.	1,003.0	538.5	23.4	65.4	1,630.3
Deleted SHS ha. (reportable)	33.5	119.0	0.3	0.3	153.1
Deferred SHS ha. (reportable)	9.4	39.5	21.9	44.7	115.5
Variance % (1) (reportable)	5.2%	21.4%	45.4%	39.5%	15.6%
Addition ha.	90.3	223.6	20.5	18.3	352.7
Bypassed ha.	0.0	0.0	0.0	0.0	0.0
Total Harvest ha. (2)	1,093.3	762.1	44.0	83.7	1,983.0

(1) Variance % is the Deleted and Deferred SHS ha. expressed as a percentage of the FHP SHS Harvest, the Deleted and Deferred SHS ha.

(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
08417409221	5	Extra road required; Access to other blocks.
08417411391	5	Narrow block and/or irregular shaped block.
08417420211	5	Narrow block and/or irregular shaped block.
08418402551	5	Extra road required; Access to other blocks.
08418435861	5	Extra road required due to rugged terrain.
08317435371	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.

The following blocks contain >600 st/ha of White Spruce understorey but are too small for understorey protection methods, and will not have the understorey protected by avoidance or strips:

08317434811

08417405321

08417409941

No understorey assessments will be submitted for these blocks.

Roads

Roads Close to Watercourses

Road No.	Grid Location	Base Info	Field Call	Distance of Watercourse From Road	Habitat Rating
01591	1178	SL	SL	200	U
03831	3475	SL	SL	200	U
20211	1179	SL	SL	200	U
27381	3441	SL	SL	200	U1
34811	3465	SL	SL	200	U
35251	3475	SL	SL	200	U
35371	3272	SL	SL	200	U
	3465	SL	SL	200	U
36221	2613	SL	SL	200	U

The “Distance of Watercourse From Road” is the minimum distance allowed in Table 2 of the OGRs without ESRD approval. The roads listed are within those minimum distances. Please refer to the FHP map and layout block maps for more information.

In the above table, possible “Base Info” watercourse classifications are indefinite (E), intermittent (I), perennial (P), unmapped (UM)), lake < 4 ha (SL) or lake ≥ 4 ha (LL). The possible “Field Call” watercourse classifications are intermittent (I), transitional (T), small permanent (SP), large permanent (LP), lake < 4 ha (SL), lake ≥ 4 ha (LL). The “Habitat Rating” identifies watercourses surveyed as fish bearing or potentially fish bearing (SF), surveyed as non-fish bearing (SN) or unsurveyed (U). The “Field Call” 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.