

Planning Unit 071224

Final Harvest Plan

1. Introduction

This plan is being submitted for appraisal, for a 5-year Final Harvest Plan (FHP) approval under the 2012 Alberta-Pacific Forest Industries Inc. (Alberta-Pacific) Annual Operating Plan (AOP). Planning Unit 071224 is located south of Calling Lake.

The planning unit is located in Forest Management Unit (FMU) L2. Alberta-Pacific has rights to D and D(C) as deciduous landbase.

Spruceland Millworks Inc. (Spruceland), Vanderwell Contractors (1971) Ltd. (Vanderwell) and the Community Timber Permit Program (CTPP) are allocated portions of the coniferous Annual Allowable Cut (AAC) from the DC, C and CD cover groups.

The 1:15,000 Harvest Design maps will be the spatial media that is approved. The block lists are the tabular media that is approved. If the attributes in the block listings contradict the 1:15,000 maps, the maps will be the media approved. The layout block maps have been submitted for additional information. If the layout block maps contain pertinent information not found on the 1:15,000 maps, this information will be summarized in Section 3.

2. Planning Unit Specific Comments

The harvest design utilizes the 2006 Spatial Harvest Sequence (SHS). The plan and SHS were designed to remove second pass timber within the area. 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 operators have reviewed and agreed to the deciduous design.

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

The Calling River is navigable and fish bearing and will be buffered accordingly. The creek that runs through the north of sections 27 and 28 of Twp. 71-21-4 is fish bearing and has been crossed and buffered accordingly.

Blocks within this unit are within 500 metres downstream of a Class B waterbody and have been buffered accordingly. See section 3 for a listing of blocks affected.

All unsurveyed creeks have been buffered and crossed as though they were fish bearing.

One or more of the 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.

In sections 28, 33 and 34 of Twp. 71-21-4, the road that connects blocks 28681 and 34221 will remain open for Calling Lake FireSmart initiatives.

The following blocks contain ≥ 600 st/ha of White Spruce understorey but due to FireSmart commitments, will not have the understorey protected by avoidance or strips:

07121428531 07121434441
07121428691
07121434221

Through the local consultation process, sled trails in Twp. 71-22-4 were identified. Alberta-Pacific will endeavor to minimize impacts on these trails during harvesting activities.

The western portion of block 21631 in section 21 Twp. 70-22-4 has been removed as a result of wildlife concerns.

Some of the blocks in this unit are outside FireSmart Community Zones as identified by Alberta Sustainable Resource Development (ASRD). In these blocks, the retention of debris piles may also be utilized in addition to the above strategies, as per Forest Protection Directive 2007-02. The blocks within the FireSmart area are listed in section 3.

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

Design Comments

Type lines between some combined blocks (types) are difficult to follow. For this reason, field crews “*straight lined*” many of the splits between these indistinguishable types to create a boundary line for the silviculture department to plan appropriate treatments.

During the layout phase of this operation, Alberta-Pacific looked for signs of insect or disease infestations. No significant signs were encountered during this phase.

3. Block Information

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

Landbase Volume Summary

Company	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
Quota	620	40,736	103,569	0	144,305
Alberta-Pacific	1,345	254,670	0	19,386	274,056

The following blocks are within 500 metres downstream of a Class B waterbody and have been buffered accordingly:

07121434221	07122430441
07121434441	07123425721

The following blocks are inside a community FireSmart Zone:

07021432271	07121409371	07121428261
07021432461	07121409391	07121428531
07021432771	07121409791	07121428691
07022425681	07121409881	07121434221
07022435341	07121409931	07121434441
07022435771	07121410661	07122401721
07121405291	07121415241	07122402151
07121405331	07121415271	07122402281
07121405671	07121416361	07122411251
07121406171	07121417471	07122411751
07121406341	07121417831	07122412221
07121406731	07121417971	07122412711
07121407281	07121418421	07122412791
07121407341	07121418691	07122413331
07121407951	07121418931	07122413731
07121408681	07121420131	

Block Comments

The SHS stands in Section 19 of Twp. 071-21-4 were removed from the plan due to patented land. The SHS stands at the following grid references in Twp. 071-22-4 were removed for erroneous timber types: 1338, 2329, 2345, 2452 and 2467. These stands had opened up and the deciduous regeneration was doing well under the open canopy.

Block Comments (Cont.)

Twp. 070-21-4

07021432271 Area in south added from outside the 15 year SHS following the stand type and to avoid isolating timber. SHS stand to east of block deleted due to operational reasons. Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection. Retention Area 32789 has been added to the block to assist in the wind protection of understorey strips.

Twp. 070-22-4

07022415181 Area in east added from outside the 15 year SHS following the stand type and to avoid isolating timber. Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. The block will be harvested using understorey avoidance techniques.

07022415461 SHS stands to the east in Section13 have been deferred from the plan due to isolation. Block is split by an unmapped pipeline.

07022416591 Deletion in north due to buffers and operational reasons.

07022421631 West deletion due to wildlife concerns.

07022425681 Area in south added from outside the 15 year SHS to avoid isolating timber.

07022427421 Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. A detailed block plan will be created for understorey protection.

07022435341 Areas in east added from outside the 15 year SHS following the stand type. Deletions in south due to erroneous timber types (C22Sw8Pb2, C15Sb10). West deletion due to erroneous timber type, willow opening. Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. A detailed block plan will be created for understorey protection. Block is split by an unmapped pipeline.

07022435771 Skid trails access the west and north islands of the block.

Block Comments (Cont.)

Twp. 071-21-4

- 07121405291 South deletion due to creek buffer. West deletion due to operational reasons; with the terrain in the area, the conifer understorey would have been difficult to protect so the area was removed from the plan. Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection.
- 07121405331 Areas in north and south added from outside the 15 year SHS following stand type and to avoid isolating timber. Block is split by an unmapped pipeline. Deletion in west due to buffers. Deletion in east due to operational reasons and landuse dispositions. Central deletion left for windfirmness of adjacent conifer stands. SHS stands to east of block deleted for windfirmness and operational reasons. Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. The block will be harvested using understorey avoidance techniques.
- 07121406171 Block shares boundary with understorey protection Block 07121407341. Southwest deletion due to landuse dispositions. Northwest deletion due to buffers and operational reasons; the area would require a new approach to the highway or a high percentage of parallel in-block road. East deletions due to operational reasons. The mapped small permanent creek along the west boundary was identified in the field as transitional small permanent and a 10m buffer was used.
- 07121406341 Alberta-Pacific PSP 18 was removed from the northeast corner of the block. Block is split by an unmapped pipeline. SHS stands to north of block across the road were removed for windfirmness of adjacent conifer stands and erroneous timber type (C24Aw7Sw3).
- 07121406731 Areas deleted in the northwest, southeast and west due to buffers.
- 07121407281 Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection.

Block Comments (Cont.)

- 07121407341 Areas to the west were removed for windfirmness for the adjacent conifer stands. Northeast deletion due to buffers. Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection. Retention Area 07449 has been added to the block to assist in the wind protection of understorey strips.
- 07121407951 Deletion to west due to operational reasons. SHS stand to south of block was deleted due to isolation.
- 07121408681 South deletion due to buffers and operational reasons. SHS stand to northwest deleted due to buffers and windfirmness for the adjacent conifer stands.
- 07121409371 Area to south deleted due to buffers and operational reasons. SHS stands to the west of block at grid references 0874 and 0924 were removed from the plan for windfirmness on the adjacent conifer stands.
- 07121409791 Central deletion due to buffers and windfirmness for adjacent conifer stands. Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection.
- 07121416361 Central deletion due to buffers and operational reasons. Block is split by an unmapped pipeline. Block contains ≥ 600 stems/ha of White Spruce understorey. The block will be harvested using understorey avoidance techniques.
- 07121417471 Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection.
- 07121417831 Block is split by an unmapped pipeline. A skid trail accesses the northwest island. Block contains ≥ 600 stems/ha of White Spruce understorey. The block will be harvested using understorey avoidance techniques.
- 07121417971 West deletion was for windfirmness on the adjacent conifer stand. Block is split by an unmapped pipeline. Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection.

Block Comments (Cont.)

- 07121418421 The mapped small permanent along the east boundary flowed away from the block to the east. Along the northeast boundary of the block, only an ephemeral draw was found and a lesser vegetation buffer was used at that location.
- 07121418691 Area in west added from outside the 15 year SHS following the stand type. Central deletion due to buffers. North boundary follows the edge of patented land. SHS stands to the north of the block in Section 19 have also been removed due to the PNT. SHS stands to the east of the block have been removed from the plan for windfirmness on the adjacent conifer stands.
- 07121418931 SHS stands to the southeast of the block have been deleted for operational reasons.
- 07121420131 Central deletion due to buffers. West boundary follows the edge of patented land. SHS stands to the northeast of the block in Section 20 have been removed due to high surface water. Block contains ≥ 600 stems/ha of White Spruce understorey but is too small for understorey protection by strips or avoidance. No detailed block plan will be created for this block.
- 07121428261 Block contains ≥ 600 stems/ha of White Spruce understorey but is too small for understorey protection by strips or avoidance. No detailed block plan will be created for this block.
- 07121428531 Central deletion removed for wildlife. Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. It will be clearcut due to FireSmart commitments.
- 07121428691 Area added from outside the 15 year SHS to avoid isolation. Deletion to southwest due to buffers and operational reasons. Block contains ≥ 600 stems/ha of White Spruce understorey. It will be clearcut due to FireSmart commitments.
- 07121434221 South deletions due to buffers and wildlife removals. Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. It will be clearcut due to FireSmart commitments.

Block Comments (Cont.)

07121434441 Area added from outside the 15 year SHS to avoid isolation. Southeast deletion due to buffers, wildlife removal and erroneous timber type (C16Sb10). Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. It will be clearcut due to FireSmart commitments.

Twp. 071-22-4

07122401721 Stands to west removed from the plan due to aesthetic concerns along the lake and the highway. Deletions to south due to operational reasons and young and vigorously growing stands. Deletions to north due to landuse and operational reasons.

07122402151 Skid trail accesses southwest island.

07122404181 Stand to north at grid reference 0924 deleted due to operational reasons.

07122405581 Area added from outside the 15 year SHS to avoid isolation. Deletion on south boundary due to erroneous timber type (C15Sb10). Deletion on east boundary due to boundary following the type.

07122406761 Area added from outside the 15 year SHS to avoid isolation. Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. A detailed block plan will be created for understorey protection.

07122407821 Block contains ≥ 600 stems/ha of White Spruce understorey. The block will be harvested using understorey avoidance techniques.

07122408771 Areas to south deleted due to young and vigorously growing stands.

07122411251 Deletion on west boundary due to erroneous timber type (C18Bw3Sw3Aw2Pb1Lt1). Stands to west of block in Section 10 were removed from plan due to operational reasons and isolation. Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. The block will be harvested using understorey avoidance techniques.

Block Comments (Cont.)

- 07122411751 Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. A detailed block plan will be created for understorey protection.
- 07122412221 Southwest deletion due to operational reasons. Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection. Retention Area 12239 has been added to the block to assist in the wind protection of understorey strips.
- 07122412711 Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. A detailed block plan will be created for understorey protection.
- 07122412791 Northwest deletion due to 'A' density deciduous stand (A25Aw10). Deletion to south due to boundary following type. Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection.
- 07122413331 Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. The block will be harvested using understorey avoidance techniques.
- 07122413731 Deletions due to a creek buffer, operational reasons and following an existing cutblock edge.
- 07122417171 Areas added from outside the 15 year SHS following the stand type. Southwest deletion due to buffer and erroneous timber type (C10Sb10). Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection. Stand to southeast at grid reference 1743 was removed from plan due to young and vigorously growing stands. Stand to southeast at grid reference 1766 was removed from plan due to isolation.
- 07122418171 Areas added from outside the 15 year SHS following the stand type.

Block Comments (Cont.)

- 07122418351 Areas added from outside the 15 year SHS following the stand type. Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. A detailed block plan will be created for understorey protection.
- 07122419281 Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection.
- 07122430221 Block contains ≥ 600 stems/ha of White Spruce understorey. A detailed block plan will be created for understorey protection.
- 07122430441 Deletion to west due to operational reasons. Stand to southeast removed from the plan due to isolation. Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. A detailed block plan will be created for understorey protection.

Twp. 071-23-4

- 07123425721 South deletion due to operational reasons and erroneous timber type (B24Sw6Aw4). Stand to northwest removed from the plan due to buffers and operational reasons. Block contains clumps of ≥ 600 stems/ha of White Spruce understorey and the clumps are ≥ 2 hectares. The block will be harvested using understorey avoidance techniques.

Refer to the end of this Harvest Design Report for the Layout Block Maps.

Understorey assessments were conducted on the deciduous blocks identified during initial layout with > 400 stems/ha. of white spruce understorey.

Understorey detailed block plans will be created for blocks with ≥ 600 stems/ha of non-merchantable ($< 15\text{m}$) White Spruce understorey that are \geq two hectares which are undergoing understorey protection methods as per Section 7.5 of the Northeast Alberta Operating Ground Rules (OGRs). Other blocks with non-merchantable White Spruce understorey will be harvested using avoidance. No detailed block plan will be created for those blocks. Balsam Fir, Pine, and Black Spruce understorey will be protected using understorey avoidance methods.

Detailed block plans for understorey protection are required for the following blocks since they averaged ≥ 600 stems/ha. of White Spruce understorey:

07021432771	07121417471	07122417171
07121405291	07121417971	07122419281
07121407281	07121428691	07122430221
07121407341	07122412221	
07121409791	07122412791	

The following deciduous blocks contain clumps \geq two hectares of White Spruce understorey with densities ≥ 600 stems/ha. and will be harvested using protection methods as shown on a detailed block plan:

07022427421	07122406761	07122418351
07022435341	07122411751	07122430441
07121428531	07122412711	

The understorey assessment surveys will be submitted prior to harvesting operations.

The following blocks contain ≥ 600 st/ha of White Spruce understorey but due to FireSmart commitments, will not have the understorey protected by avoidance or strips:

07121428531	07121428261
07121428691	07121434221
07121434441	

The following block contains ≥ 600 st/ha of White Spruce understorey but is too small for understorey protection methods, and will not have the understorey protected by avoidance or strips:

07121420131

No understorey assessment will be submitted for this block.

Block Buffer Table

Source ID	Buffer Location	Base Info	Field Call	Buffer Type	Habitat Rating
07022415181	NW	E	E	LV	U
07022416591	NE	E	B	30	U
	N	LL	LL	100	U
	E	UM	B	30	U
	E	UM	E	LV	U
07022421631	E	SL	B	30	U

Block Buffer Table (Cont.)

Source ID	Buffer Location	Base Info	Field Call	Buffer Type	Habitat Rating
	E	UM	B	30	U
07022421631	E	UM	E	LV	U
	W-C	UM	E	MFZ	U
07022427421	S	UM	B	30	U
07022435341	NW	LL	LL	100	U
	SW	UM	E	LV	U
07022435771	SE	UM	B	30	U
	W-C	UM	E	LV	U
	SE	UM	I	LV	U
07121405291	SW	UM	E	LV	U
	S-C	UM	T	10	U
07121405331	W	E	B	30	U
	E	E	E	LV	U
	W	P	B	30	U
07121406171	W	P	T	10	U
	W	UM	E	LV	U
	W	UM	T	10	U
07121406341	SE	LL	LL	100	U
	E	P	B	30	U
	E	P	SP	30	U
07121406731	E, NE	E	B	30	U
	W	LL	LL	100	U
	SE, NW	P	B	30	U
	W	P	SP	30	U
	E	UM	B	30	U
07121407341	NE	P	SP	30	U
	NE	UM	E	LV	U
07121408681	SE	UM	B	30	U
07121409371	S	UM	SP	30	U
	S, SE	UM	T	10	U
07121409391	SE	UM	SP	30	U
07121409791	C, W	UM	E	LV	U
	C, W	UM	SP	30	U
	C	UM	T	10	U
07121409931	SE	I	E	LV	U
07121410661	N-I	UM	E	LV	U
07121415241	N	UM	B	30	U
	N	UM	E	LV	U
	N	UM	T	10	U
07121415271	S	UM	B	30	U
07121416361	C, N	UM	B	30	U
	W	P	E	LV	U
07121417471	W	P	B	30	U
	W	P	SP	30	U
07121417971	S	P	B	30	U
	S	UM	B	30	U
	N-I	UM	E	LV	U
07121418421	NE	P	E	LV	U
	E	P	SP	30	U
	E	UM	SP	30	U
07121418691	SE	P	SP	30	U

Block Buffer Table (Cont.)

Source ID	Buffer Location	Base Info	Field Call	Buffer Type	Habitat Rating
	C	UM	T	10	U
07121418931	C	E	E	LV	U
	W	E	SP	30	U
07121420131	SE	P	B	30	U
	NE	UM	B	30	U
	N	UM	E	LV	U
	C	UM	T	10	U
07121428261	N	P	B	30	SF
07121428691	SE	P	B	30	SF
	S	P	SP	30	SF
07121434221	S	UM	B	30	U
	S	P	B	30	SF
07121434441	E	UM	O	60	U
	E	P	LP	60	SF
07122402151	W	UM	E	LV	U
07122407481	NE	E	E	LV	U
07122407821	NW	I	E	LV	U
	NW	I	SP	30	U
	NW	UM	E	LV	U
07122411251	E-C	UM	E	LV	U
07122412221	NE, E	E	E	LV	U
07122413331	NE-C	UM	E	MFZ	U
07122413731	W-C	E	SP	30	U
	W-C	E	T	10	U
07122417171	NE, NW	E	NW	0	U
	SW	LL	LL	100	U
07122418351	SE	E	NW	0	U
	E	LL	LL	100	U
07123425721	N	E	B	30	U

In the above table, possible “Base Info” watercourse classifications are indefinite (E), intermittent (I), perennial (P), lake < 4 ha (SL), lake ≥ 4 ha (LL) or unmapped (UM). The possible “Field Call” 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), oxbow lake (O), spring (S), Water Source Area (WA), or no watercourse (NW). The possible “Buffer Type” is lesser vegetation (LV), no buffer (0), machine free zone (MFZ) and non-operational ten, twenty, thirty, sixty or one hundred metres (10, 20, 30, 60 or 100). 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.

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)
07021432271	NF	INC		2	463	0	51	514
07021432461	NF	INC		2	391	0	19	410
07021432771	NF	INC	U	37	6,435	0	532	6,967
07022415181	F	INC		19	3,032	0	114	3,146
07022415461	F	INC		9	1,505	0	47	1,552
07022416591	F	INC		14	2,356	0	74	2,430
07022421631	NF	INC		11	1,735	0	60	1,795
07022422421	F	INC		2	359	0	11	370
07022425681	F	INC		42	9,456	0	542	9,998
07022427421	NF	INC	U	16	2,510	0	83	2,593
07022435341	F	INC	U	39	8,762	0	422	9,184
07022435771	F	INC		9	1,929	0	265	2,194
07121405291	F	INC	U	25	4,810	0	589	5,399
07121405331	NF	INC		124	29,700	0	3,333	33,033
07121405671	NF	INC		3	683	0	75	758
07121406171	NF	INC		15	3,148	0	482	3,630
07121406341	T	INC		35	8,027	0	1,016	9,043
07121406731	T	INC		42	10,907	0	465	11,372
07121407281	F	INC	U	11	2,303	0	153	2,456
07121407341	F	INC	U	29	5,946	0	723	6,669
07121407951	F	INC		5	1,135	0	141	1,276
07121408681	F	INC		6	1,303	0	44	1,347
07121409371	F	INC		5	1,059	0	111	1,170
07121409391	F	INC		5	818	0	47	865
07121409791	F	INC	U	11	1,775	0	170	1,945
07121409881	F	INC		5	739	0	82	821
07121409931	F	INC		5	883	0	236	1,119
07121410661	F	INC		14	1,963	0	89	2,052
07121415241	F	INC		15	3,260	0	388	3,648
07121415271	F	INC		7	1,588	0	71	1,659
07121416361	F	INC		14	2,875	0	106	2,981
07121417471	F	INC	U	13	2,566	0	290	2,856
07121417831	F	INC		8	1,763	0	56	1,819

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)
07121417971	F	INC	U	17	3,173	0	163	3,336
07121418421	F	INC		6	901	0	157	1,058
07121418691	F	INC		27	6,887	0	447	7,334
07121418931	F	INC		7	1,139	0	168	1,307
07121420131	F	INC		4	1,114	0	34	1,148
07121428261	F	INC		2	254	0	8	262
07121428531	F	INC		17	3,050	0	105	3,155
07121428691	F	INC		15	2,744	0	109	2,853
07121434221	F	INC		11	2,082	0	70	2,152
07121434441	F	INC		18	3,174	0	138	3,312
07122401721	T	INC		6	1,601	0	77	1,678
07122402151	F	INC		20	2,792	0	132	2,924
07122402281	F	INC		4	546	0	23	569
07122404181	F	INC		9	1,335	0	42	1,377
07122405581	F	INC		23	3,980	0	185	4,165
07122405731	F	INC		7	1,004	0	83	1,087
07122406761	F	INC	U	37	5,210	0	564	5,774
07122407271	F	INC		38	5,771	0	195	5,966
07122407481	F	INC		7	863	0	116	979
07122407821	F	INC		13	1,749	0	213	1,962
07122408771	F	INC		9	1,443	0	113	1,556
07122411251	F	INC		27	5,501	0	396	5,897
07122411751	F	INC	U	24	4,559	0	278	4,837
07122412221	F	INC	U	48	9,266	0	2,062	11,328
07122412711	NF	INC	U	28	6,503	0	220	6,723
07122412791	F	INC	U	9	1,778	0	75	1,853
07122413331	F	INC		38	8,586	0	264	8,850
07122413731	F	INC		9	2,431	0	75	2,506
07122417171	F	INC	U	44	5,123	0	315	5,438
07122418171	F	INC		68	11,739	0	573	12,312
07122418351	F	INC	U	86	11,235	0	358	11,593
07122419281	F	INC	U	15	2,414	0	92	2,506
07122430221	F	INC	U	17	2,712	0	84	2,796
07122430441	F	INC	U	23	3,904	0	192	4,096
07120425721	F	INC		7	1,407	0	358	1,765
Total				1,340	254,154	0	19,371	273,525

Retention Area Listing
(Values Affected by Rounding)

Block Id	Harvest Season	Status	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
07449			0.5	129	0	15	144
12239			0.4	86	0	21	107
32789			0.7	155	0	13	168
Total			1.5	370	0	49	419

4. Access and Road Information

The West Calling Lake Road and the 1000 Road will access this planning unit from Highway 813 south of Calling Lake. See the Planning Unit Access Map at the end of this Section.

For the tables in this section, possible “Base Info” watercourse classifications are indefinite (E), intermittent (I), perennial (P) or unmapped (UM). The possible “Field Call” 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 watercourse (NW). “Watercourse Features” identify the fish habitat rating and the navigability of the watercourse. The habitat rating identifies watercourses surveyed as fish bearing or potentially fish bearing (SF), surveyed as non-fish bearing (SN) or unsurveyed (U). The navigability rating identifies watercourse as being potentially navigable (N) or potentially unnavigable (U) based on the possibility of traveling the stream with a vessel. 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.

Crossings that contain no watercourse classification are land use crossings such as pipelines, powerlines and junctions.

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

There was no access opened for layout under Temporary Field Authority (TFA).

New access and 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.

No crossings within planning unit are not exempt from the Water Act.

The proposed temporary roads in Twp. 71-21-4, sections 28, 33, and 34 will be left open for the Calling Lake FireSmart initiative. Blocks will be listed in section 9.

Road Comments

Road No.	Class	Comments
02151	4W	Skid trail accesses southwest island.
05331	4S	This main road contains a favorable slope of 5% for 70m at grid location 0511 in Twp. 071-21-4.
06731	4S/4W	This road has summer access for block 07121406731 to the west. The winter access follows an existing trail in the northeast for the access into 07022425681.
07271	4W	This road is proposed to limit the number of pipeline crossings.
12791	4W	This road is proposed to limit the approaches onto Highway 813.
13731	4W	This road is proposed to limit the approaches onto Highway 813.
17831	4W	A skid trail accesses the northwest island.
22421	4W	This main road contains adverse slope of 60% for 5m at grid location 2243 in Twp. 070-22-4.
28531	4W	This road loops outside the block on existing access in the east to maximize the coniferous understorey protection within the block.
28691	4W	The watercourse crossing at grid location 2847 in Twp. 071-21-4 is on a fish bearing stream.
35771	4W	Skid trails access the west and north islands of the block.

Main Access

Road No.	Class	Length (Km)	Construction Season	Crossing Location
01721	4S	0.08	Non-Frozen	0173
02151	4W	1.08	Frozen	
02281	4W	0.96	Frozen	
04181	4W	2.07	Frozen	
05291	4W	0.20	Frozen	
05331	4S	1.83	Non-Frozen	3137
05581	4W	0.47	Frozen	
05731	4W	0.60	Frozen	
06171	4S	0.93	Non-Frozen	
06341	4S	0.50	Non-Frozen	0634
06731	4S	1.41	Non-Frozen	
06731	4W	0.49	Frozen	
06761	4W	0.04	Frozen	0679
07271	4W	2.23	Frozen	
07281	4W	0.19	Frozen	0718
07481	4W	0.16	Frozen	
07821	4W	3.44	Frozen	0814 0815
07951	4W	0.09	Frozen	
08681	4W	0.18	Frozen	
08771	4W	1.30	Frozen	
09371	4W	2.89	Frozen	0946 0957 0947
09391				
09391	4W	0.61	Frozen	
09791	4W	0.87	Frozen	0968

Main Access (Cont.)

Road No.	Class	Length (Km)	Construction Season	Crossing Location
09881	4W	0.16	Frozen	
09931	4W	0.75	Frozen	
10661	4W	1.58	Frozen	1046 1065
11251	4W	0.98	Frozen	1124
11751	4W	1.18	Frozen	
12221	4W	1.23	Frozen	1255
12711	4S	1.16	Non-Frozen	0177
12791	4W	1.21	Frozen	
13331	4W	1.41	Frozen	1259
13731	4W	0.83	Frozen	1363
15181	4W	1.10	Frozen	
15241	4W	1.28	Frozen	
15271	4W	0.11	Frozen	1696
15461	4W	0.99	Frozen	1566
16361	4W	2.01	Frozen	1625 1635
16591	4W	0.70	Frozen	
17171	4W	0.64	Frozen	
17471	4W	0.39	Frozen	
17831	4W	0.71	Frozen	1773
17971	4W	2.08	Frozen	1648 1649 1778 2112 2121 2141
18171	4W	1.69	Frozen	
18351	4W	1.73	Frozen	
18421	4W	0.85	Frozen	
18691	4W	1.13	Frozen	1868
18931	4W	0.23	Frozen	1882
19281	4W	1.26	Frozen	
20131	4W	1.02	Frozen	1991 2012
21631	4S	0.36	Non-Frozen	2163 2164
22421	4W	0.48	Frozen	2243 2252
25681	4W	1.45	Frozen	3651 3667
25721	4W	1.12	Frozen	
28261	4W	0.95	Frozen	
28531	4W	2.06	Frozen	
28691	4W	0.94	Frozen	2847
30221	4W	0.77	Frozen	3021
30441	4W	0.02	Frozen	3032
32271	4S	0.71	Non-Frozen	3226
34221	4W	0.89	Frozen	
34441	4W	0.01	Frozen	3422
35341	4W	1.32	Frozen	3533

Main Access (Cont.)

Road No.	Class	Length (Km)	Construction Season	Crossing Location
35771	4W	0.41	Frozen	3548 3546 3565
Total Km Class 4W:		55.54		
Total Km Class 4S:		6.98		
Total Km Class 4P:		0.00		

Main Access Crossings

Road No.	Crossing Location	Source Id	Base Info	Field Call	Watercourse Features
01721	0173				
05331	3137				
06341	0634				
06761	0679				
07281	0718				
07821	0814				
	0815		I	E	U-U
09371	0946		UM	T	U-U
	0957		UM	T	U-U
09391	0947		UM	T	U-U
09791	0968		UM	SP	U-U
10661	1046		P	SP	U-U
	1065				
11251	1124	07122411251	UM	E	U-U
12221	1255		E	E	U-U
12711	0177				
13331	1259		E	T	U-U
13731	1363		E	T	U-U
15271	1696		UM	T	U-U
15461	1566				
16361	1625		UM	B	U-U
	1635	07121416361	UM	E	U-U
17831	1773				
17971	1648		UM	SP	U-U
	1649		P	SP	U-U
	1778				
	2112		UM	E	U-U
	2121		UM	I	U-U
	2141		UM	SP	U-U
18691	1868		UM	T	U-U
18931	1882		E	E	U-U
20131	1991		UM	T	U-U
	2012		UM	T	U-U
21631	2163	07022421631	UM	E	U-U
	2164				
22421	2243		UM	I	U-U
	2252		E	E	U-U
25681	3651				
	3667				

Main Access (Cont.)

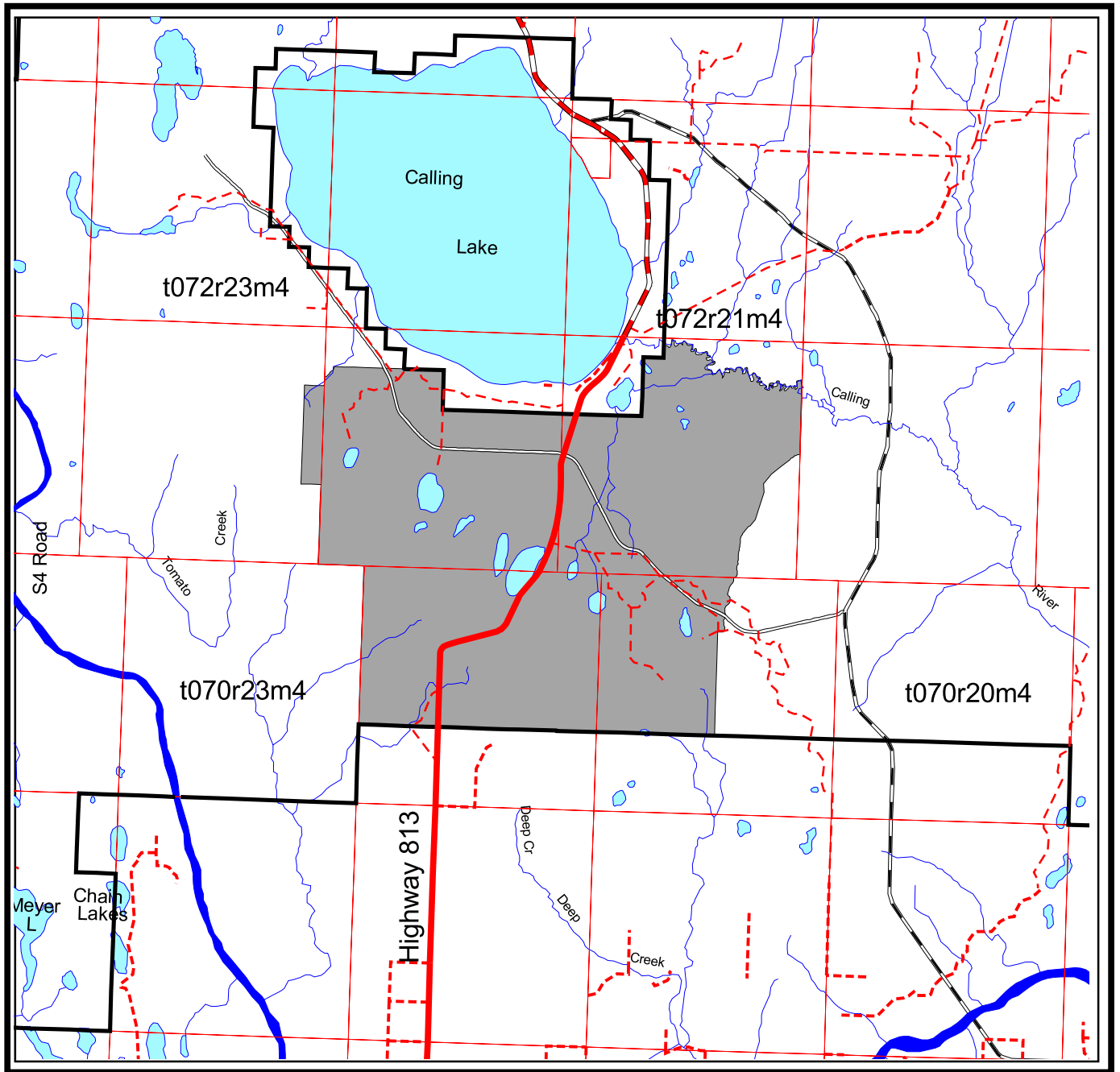
Road No.	Class	Length (Km)	Construction Season	Crossing Location	
28691	2847		P	SP	U-U
30221	3021				
30441	3032				
32271	3226		UM	I	U-U
34441	3422				
35341	3533				
	3548				
35771	3546				
	3565		UM	E	U-U

Skid Trail Crossings

Road No.	Crossing Location	Source Id	Base Info	Field Call	Watercourse Features
35771	3566 3576		E	E	U-U

Planning Unit 071224

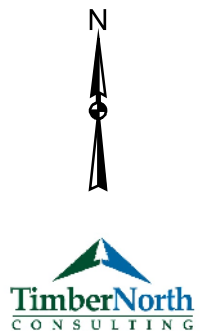
Access Map



1:250000



Alberta-Pacific
Forest Industries Inc.



5. Non Timber Values

Public Involvement

Copies of this harvest plan are available for viewing at the Athabasca, Fort McMurray and Lac La Biche libraries, TimberNorth-Athabasca, the Alberta-Pacific field offices (Wabasca and Janvier) and the Alberta-Pacific mill site.

Alberta-Pacific hosted a public meeting, October 26, 2010, for Planning Unit 071224 in Calling Lake. Any concerns or comments have been noted in the appropriate section below.

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 071224:

- | | | |
|--------|--------|--------|
| - 1302 | - 1840 | - 2770 |
| - 1420 | - 2035 | |
| - 1497 | - 2184 | |

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) 509 have been notified of Alberta-Pacific's harvest plans within Planning Unit 071224:

- | | | |
|-------|-------|-------|
| - 239 | - 480 | - 988 |
| - 260 | - 910 | |
| - 261 | - 913 | |

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

Forest Recreation Groups

A consultation took place with snowmobile operators in the area, no concerns were identified during this meeting.

Grazing Lease Operators

There are currently no grazing leases within this planning unit.

Historical Resources

No known historical resource sites are located within this unit. Lands on which historical resource sites are likely to occur will be checked prior to commencement of operations or post harvest.

Forest Aesthetics

This planning unit contains blocks that are adjacent to Highway 813. The stand structure and lesser vegetation left within these blocks will be concentrated along the boundary adjacent to the highway to minimize visual sensitivity.

Stands in the southeast of Section 1 in Twp. 071-22-4 have been removed from the plan as a buffer between the lake and the Highway.

Land Use

As per a Land Status Automated System (LSAS) land standing report dated June 14, 2012, there are dispositions that restrict the harvesting of timber within the planning unit, they are listed below and have been removed from the harvest design.

SHS stands in Section 19 of Twp. 071-21-4 have been removed from the harvest design due to patented land.

Four Permanent Sample Plots (PSPs) are located in planning unit 071224. Any plots that fell within the blocks scheduled for removal have been removed from the harvest design.

The following dispositions have been reviewed and contain no restrictions for timber removal at this time and do not affect the harvest design: CNT 090070, CNT 090005, CNT 030019, PNT 010360, PNT 810615, PNT 810619, PNT 830477, PNT 910335, and PNT 920160.

Twp. 071-21-4, LSD 6 showed ISP #950052 as active. This was confirmed to be inactive and therefore will not affect the design.

Wildlife

This planning unit is not within or near key Caribou or Ungulate Zones. Operations will adhere to the Alberta-Pacific wildlife plan submitted annually in the fall.

No areas of concentrated terrestrial lichens were identified during layout.

All known sensitive wildlife sites have been buffered according to section 7.7.6.2 of the OGRs.

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

07121417471

07121420131

Access and Access Management

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.
- Sight lines were considered while designing the harvest blocks and roads. Methods that might have been used are blending blocks and roads into contour levels, terrain features, vegetation cover types, and retained stand structure.

6. Integration with Affected Forest Companies

Spruceland and Vanderwell have signed off regarding this plan.

Quota Block Listing
(Values Affected by Rounding)

Block Id	Harvest Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
32284	F	CTL		6	489	936	0	1,425
32364	F	CTL		5	433	801	0	1,234
32484	F	CTL		18	2,250	1,205	0	3,455
32734	F	CTL		2	118	475	0	593
03664	F	CTL		3	80	716	0	796
04144	F	CTL		8	196	1,764	0	1,960
05324	F	CTL		13	1,781	2,037	0	3,818
05364	F	CTL		14	678	2,647	0	3,325
05934	F	CTL		8	536	1,159	0	1,695
06224	F	CTL		8	548	1,848	0	2,396
06464	F	CTL		5	199	652	0	851
06484	F	CTL		2	9	297	0	306
06644	F	CTL		5	123	1,052	0	1,175
06664	F	CTL		5	275	1,041	0	1,316
06984	F	CTL		5	29	463	0	492

Quota Block Listing (Cont.)

(Values Affected by Rounding)

Block Id	Harvest Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
07224	F	CTL		9	150	1,026	0	1,176
07244	F	CTL		2	94	377	0	471
07264	F	CTL		1	74	294	0	368
07434	F	CTL		6	311	1,229	0	1,540
07624	F	CTL		1	4	129	0	133
07684	F	CTL		25	2,556	3,299	0	5,855
07964	F	CTL		2	47	426	0	473
08234	F	CTL		15	725	3,058	0	3,783
08554	F	CTL		144	10,812	30,745	0	41,557
09674	F	CTL		21	437	3,434	0	3,871
09844	F	CTL		5	155	1,399	0	1,554
10264	F	CTL		11	322	2,899	0	3,221
11224	F	CTL		2	17	525	0	542
15194	F	CTL		5	42	1,342	0	1,384
15224	F	CTL		4	34	1,071	0	1,105
15264	F	CTL		1	12	353	0	365
15284	F	CTL		1	44	173	0	217
15864	F	CTL		1	81	54	0	135
15874	F	CTL		14	133	1,196	0	1,329
16474	F	CTL		8	252	1,989	0	2,241
16864	F	CTL		2	5	187	0	192
17144	F	CTL		35	5,135	4,826	0	9,961
17374	F	CTL		5	439	938	0	1,377
18244	F	CTL		2	42	382	0	424
18314	F	CTL		24	1,410	4,964	0	6,374
18484	F	CTL		10	1,177	1,533	0	2,710
18644	F	CTL		3	604	427	0	1,031
19624	F	CTL		12	943	2,627	0	3,570
20264	F	CTL		1	3	99	0	102
20314	F	CTL		5	163	1,464	0	1,627
20444	F	CTL		0	26	2	0	28
20624	F	CTL		2	135	315	0	450
20644	F	CTL		4	183	717	0	900
21314	F	CTL		7	197	1,784	0	1,981
21444	F	CTL		2	15	492	0	507
21624	F	CTL		4	11	363	0	374
21844	F	CTL		7	58	516	0	574
22444	F	CTL		7	20	666	0	686
22644	F	CTL		1	3	114	0	117
22824	F	CTL		15	210	1,021	0	1,231

Quota Block Listing (Cont.)
(Values Affected by Rounding)

Block Id	Harvest Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
23424	F	CTL		6	14	421	0	435
23684	F	CTL		3	7	195	0	202
26734	F	CTL		3	0	0	0	0
26844	F	CTL		12	31	999	0	1,030
26864	F	CTL		2	97	227	0	324
27464	F	CTL		3	0	0	0	0
28164	F	CTL		1	67	46	0	113
28624	F	CTL		3	93	332	0	425
28644	F	CTL		1	23	84	0	107
34824	F	CTL		4	512	220	0	732
10884	F	CTL		14	569	1,494	0	2,063
11644	F	CTL		26	3,538	2,196	0	5,734
11664	F	CTL		5	774	753	0	1,527
11824	F	CTL		3	186	657	0	843
Total				620	40,736	103,172	0	143,908

7. Spatial Harvest Sequence Summary

The table below summarizes the variance (in area) from the SHS within the planning unit, 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	1,662.8				1,662.8
FHP SHS Harvest ha.	1,105.5				1,105.5
Variance ha. (reportable)	401.2				401.2
Variance % ⁽¹⁾ (reportable)	26.6%				26.6%
Addition ha.	134.7				134.7
Bypassed ha.	0.0				0.0
Total Harvest ha. ⁽²⁾	1,240.2				1,240.2

(1) Variance % is the Variance ha. divided by the sum of the FHP SHS Harvest and Variance ha.

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

The tables below summarize the variance (in area) from the deciduous SHS into detailed categories, for Alberta-Pacific harvesting.

Variance Summary – Deleted From Net Landbase

Landbase	Area (ha)
Inventory Inconsistencies	84.6
Watercourse and Body Buffer Changes	71.2
Steep Terrain Removals	0.0
Land Use Changes	38.7
Operational and Isolation Changes	75.2
Public Concerns	0.0
Historical Removals	0.0
Aesthetic Removals	10.0
Sensitive Area Removals	10.8
GPS Anomalies	3.7

Variance Summary – Deferred from SHS

Landbase	Area (ha)
Inventory Inconsistencies	39.8
Public Concerns	0.0
Historical Removals	0.0
Aesthetic Removals	0.0
Isolated Stands	34.5
Structure Retention	0.0
Area Left for Wind Firmness	32.7

Variance Summary – Additions

Landbase	Area (ha)
Stands from the SHS outside of years 1-15	134.7
Stands that were not part of the net Landbase	0.0

8. Silviculture Information

The following incidental replacement area is based on AVI volume estimates from D cover group stands within Alberta-Pacific FHP blocks in Planning Unit 071224.

Incidental Coniferous Reforestation Volume Replacement

Estimated Incidental Volume (m ³)	Replacement Area (ha)
19,334	96.7

The following table outlines the initial silviculture declarations for FHP blocks within Planning Unit 071224. 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
07021432271	2.3	D	CC	DE	CC
07021432461	1.7	D	CC	DE	CC
07021432771	36.7	D	PC	DE	UP
07022415181	19.4	D	AV	DE	CC
07022415461	9.2	D	CC	DE	CC
07022416591	14.1	D	CC	DE	CC
07022421631	10.8	D	CC	DE	CC
07022422421	2.3	D	CC	DE	CC
07022425681	42.4	D	CC	DE	CC
07022427421	16.0	D	PC	DE	UP
07022435341	38.7	D	PC	DE	UP
07022435771	9.3	D	CC	DE	CC
07121405291	24.8	D	PC	DE	UP
07121405331	124.4	D	AV	DE	CC
07121405671	3.1	D	CC	DE	CC
07121406171	15.3	D	CC	DE	CC
07121406341	34.7	D	CC	DE	CC
07121406731	42.4	D	CC	DE	CC
07121407281	10.9	D	PC	DE	UP
07121407341	29.4	D	PC	DE	UP
07121407951	4.8	D	CC	DE	CC
07121408681	6.1	D	CC	DE	CC
07121409371	5.4	D	CC	DE	CC
07121409391	5.0	D	CC	DE	CC
07121409791	11.0	D	PC	DE	UP

Alberta-Pacific Silviculture Declarations (Cont.)

Source Id	Area (ha)	Std_ Mod	Open_ Desig	Species_ Gr	Silv_ Harv
07121409881	4.6	D	CC	DE	CC
07121409931	4.6	D	CC	DE	CC
07121410661	14.3	D	CC	DE	CC
07121415241	14.8	D	CC	DE	CC
07121415271	6.9	D	CC	DE	CC
07121416361	14.2	D	AV	DE	CC
07121417471	13.1	D	PC	DE	UP
07121417831	7.7	D	AV	DE	CC
07121417971	16.8	D	PC	DE	UP
07121418421	5.8	D	CC	DE	CC
07121418691	26.9	D	CC	DE	CC
07121418931	7.4	D	CC	DE	CC
07121420131	4.2	D	CC	DE	CC
07121428261	1.7	D	CC	DE	CC
07121428531	17.4	D	CC	DE	UP
07121428691	15.3	D	CC	DE	UP
07121434221	11.2	D	CC	DE	CC
07121434441	17.5	D	CC	DE	CC
07122401721	5.7	D	CC	DE	CC
07122402151	20.1	D	CC	DE	CC
07122402281	3.8	D	CC	DE	CC
07122404181	8.9	D	CC	DE	CC
07122405581	23.2	D	CC	DE	CC
07122405731	7.3	D	CC	DE	CC
07122406761	37.4	D	PC	DE	UP
07122407271	38.3	D	CC	DE	CC
07122407481	6.6	D	CC	DE	CC
07122407821	13.2	D	AV	DE	CC
07122408771	8.8	D	CC	DE	CC
07122411251	26.8	D	AV	DE	CC
07122411751	24.3	D	PC	DE	UP
07122412221	47.8	D	PC	DE	UP
07122412711	27.6	D	PC	DE	UP
07122412791	9.4	D	PC	DE	UP
07122413331	37.6	D	AV	DE	CC
07122413731	9.2	D	CC	DE	CC
07122417171	44.2	D	PC	DE	UP
07122418171	67.9	D	CC	DE	CC
07122418351	85.8	D	PC	DE	UP
07122419281	15.4	D	PC	DE	UP

Alberta-Pacific Silviculture Declarations (Cont.)

Source Id	Area (ha)	Std_Mod	Open_Desig	Species_Gr	Silv_Harv
07122430221	17.3	D	PC	DE	UP
07122430441	22.8	D	PC	DE	UP
07123425721	7.0	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. 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.

Blocks 07121406341, 07121407341, 07122412221 and 07122412791 are potential strata conversions for incidental replacement.

9. OGRs Variances

Blocks

The following blocks contain ≥ 600 st/ha of White Spruce understorey but due to FireSmart commitments, will not have the understorey protected by avoidance or strips:

07121428531	07121428261
07121428691	07121434221
07121434441	

The following block contains ≥ 600 st/ha of White Spruce understorey but is too small for understorey protection.

07121420131

The western portion of block 21631 in section 21 Twp. 70-22-4 has been removed as a result of wildlife concerns.

The following table identifies, according to classes, blocks which are greater than 7.0 ha within the planning unit that may contain greater than 5 % of road disturbance when constructed with the turnarounds required.

Road Percent

Source Id	% Road Class	Comments
07022415461	5	Narrow block and/or irregular shaped block.
07121416361	5	Extra road required; Access to other blocks.
07122404181	5	Extra road required; Access to other blocks.
07122405731	6	Narrow block and/or irregular shaped block.
07122407821	5	Irregular shaped block.
07122413731	5	Irregular shaped block.
07122419281	5	Extra road required; Access to other blocks.
07123425721	5	Irregular shaped block.

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

Roads

In sections 28, 33 and 34 of Twp. 71-21-4, the road that connects blocks 28681 and 34221 will remain open for Calling Lake FireSmart initiatives.

Road Comments

Road No.	Class	Comments
05291	4W	A spur road may come within 30m of a transitional small permanent stream at grid location 0547 in Twp. 071-21-4 once a turnaround is added.
06731	4S/4W	This road is within 200m of a Lake at grid location 0663 in Twp. 071-21-4.
16591	4W	A spur road is within 200m of a Lake at grid location 2151 in Twp. 070-22-4.
17171	4W	This road is within 200m of a Lake at grid location 1718 in Twp. 071-22-4.