

Planning Unit 083224 Forest Harvest Plan

1. Introduction

This Forest Harvest Plan (FHP) for Planning Unit 083224 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 Final Harvest Plan FHP approval under the 2012-13 Alberta-Pacific Forest Industries Inc. (Alberta-Pacific) Annual Operating Plan (AOP).

2. Planning Unit Specific Comments

Planning Unit 083224 is located northeast of Wabasca.

The planning unit is located in Forest Management Unit (FMU) S22J. Alberta-Pacific has rights to D, D(C), and DC as deciduous landbase and CD and C as shared coniferous landbase.

The harvest design utilizes the 2006 Spatial Harvest Sequence (SHS).

Integration

This FHP is in FMU S22J and has been provided for review to Vanderwell Contractors (1971) Ltd. (Vanderwell).

Alberta-Pacific has received their agreement for this plan.

Vanderwell and the Community Timber Permit Program (CTPP) are allocated portions of the coniferous Annual Allowable Cut (AAC) from the C and CD cover groups.

Watershed

No watercourses or waterbodies within this planning unit have been surveyed as fish bearing or navigable.

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

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 ESRD. 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.

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

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 significant signs of insect or disease within the planning unit.

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 Decid	264	56,785	2,819	9,112	68,716
Alberta-Pacific Conifer	467	27,549	76,021	1,051	104,621

The following Alberta-Pacific deciduous blocks will have their coniferous volume hauled as Forest Management Agreement (FMA) S22J primary coniferous chargeable:

08322405271 08322405641 08322416861

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)
08322403281	F	INC		4	812	0	412	1,224
08322403451	F	INC		2	568	0	63	631
08322404261	F	INC		24	6,173	0	191	6,364
08322404841	F	INC		24	6,014	0	1,028	7,042
08322405271	F	FMA		13	2,468	300	521	3,289
08322405451	F	INC		16	4,148	0	532	4,680
08322405481	F	INC		23	6,015	0	599	6,614
08322405621	F	INC		16	3,538	64	805	4,407
08322405641	F	FMA		3	832	0	26	858
08322405841	F	INC		4	1,104	0	35	1,139
08322406841	F	INC		32	8,051	274	615	8,940
08322407421	F	INC		1	329	0	11	340
08322407541	F	INC		8	1,928	0	243	2,171
08322407691	F	INC		5	576	0	347	923
08322407861	F	INC		3	551	0	130	681
08322408241	F	INC		8	1,368	0	261	1,629
08322408281	F	INC		11	1,264	882	490	2,636
08322410281	F	INC		1	371	0	11	382
08322410441	F	INC		4	588	120	291	999
08322411461	F	INC		4	779	0	208	987
08322411641	F	INC		9	2,032	0	342	2,374
08322411841	F	INC		15	2,440	160	895	3,495
08322413211	F	INC		15	2,255	1,019	619	3,893

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)
08322413661	F	INC		6	949	0	136	1,085
08322416381	F	INC		3	407	0	20	427
08322416861	F	FMA		7	1,225	0	281	1,506
Total				264	56,785	2,819	9,112	68,716

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)
08322404621	F	FMA		5	951	471	36	1,458
08322404781	F	FMA		13	1,366	1,721	89	3,176
08322405821	F	FMA		8	753	1,404	12	2,169
08322406641	F	FMA		5	561	741	7	1,309
08322407281	F	FMA		14	921	2,692	69	3,682
08322407471	F	FMA		9	814	1,633	12	2,459
08322407661	F	FMA		10	436	1,830	8	2,274
08322408221	F	FMA		12	1,533	1,670	43	3,246
08322408441	F	FMA		6	334	1,333	0	1,667
08322408641	F	FMA		3	153	423	12	588
08322408881	F	FMA		6	785	692	56	1,533
08322410541	F	FMA		27	789	5,751	51	6,591
08322410661	F	FMA		6	73	1,558	16	1,647
08322410821	F	FMA		6	40	1,271	0	1,311
08322410971	F	FMA		33	1,618	6,809	120	8,547
08322411421	F	FMA		25	964	5,700	37	6,701
08322411481	F	FMA		19	2,117	3,080	2	5,199
08322411741	F	FMA		6	580	730	100	1,410
08322413461	F	FMA		41	3,633	3,522	270	7,425
08322414821	F	FMA		24	1,648	4,390	76	6,114
08322416461	F	FMA		5	735	597	15	1,347
08322416581	F	FMA		6	177	1,402	2	1,581
08322416881	F	FMA		7	179	1,635	0	1,814
08322417221	F	FMA		7	125	1,485	0	1,610
08322417981	F	FMA		3	251	375	10	636
08322418621	F	FMA		22	922	3,923	32	4,877
08323413941	F	FMA		45	946	8,901	0	9,847
Total				373	23,404	66,325	489	90,621

**Alberta-Pacific Coniferous First Entry Block Listing –
Jack Pine**

(Values Affected by Rounding)

Source Id	Harvest Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
08322401481	F	FMA		16	332	1,718	0	2,050
08322401821	F	FMA		43	2,304	4,472	488	7,264
08322412641	F	FMA		14	372	1,491	0	1,863
08322413861	F	FMA		16	851	1,398	134	2,383
Total				89	3,859	9,079	622	13,560

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

(Values Affected by Rounding)

Source Id	Harvest Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
08322412561	F	FMA		6	286	557	0	843
Total				6	286	557	0	843

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 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 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
01821	4W	0.06	Frozen	0145 0146		
03281	4W	1.34	Frozen			
03451	4W	0.02	Frozen			
04261	4W	0.32	Frozen	0444	E	U
04621	4W	0.42	Frozen			
04781	4W	0.08	Frozen			
04841	4W	0.87	Frozen	0344		
05271	4W	1.29	Frozen	0688	SP	U
05451	4W	1.27	Frozen	0544		
05481	4W	0.70	Frozen			
05641	4W	0.56	Frozen			
05821	4W	0.24	Frozen			
05841	4W	0.75	Frozen	0584		
06641	4W	0.33	Frozen			
06841	4W	1.78	Frozen	0624	E	U
07281	4W	1.51	Frozen	0727	E	U
07421	4W	0.10	Frozen	0733	E	U
07471	4W	0.19	Frozen			
07541	4W	1.52	Frozen	0763 0773 0783 0784 0793	E E E SP E	U U U U U
07661	4W	0.85	Frozen			
07691	4W	0.17	Frozen			
07861	4W	0.37	Frozen			

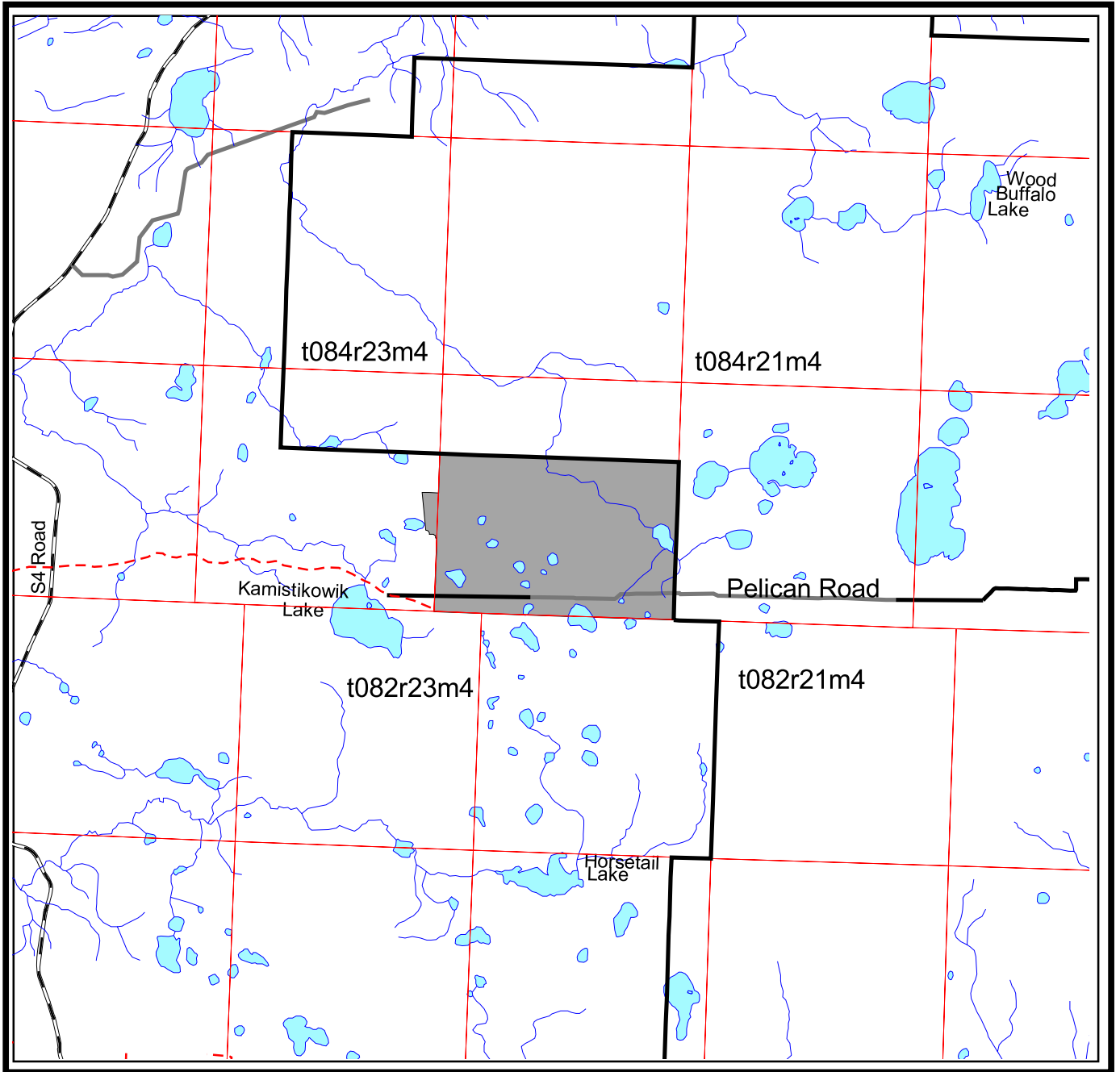
Main Access and Crossings (Cont.)

Road No.	Class	Length (Km)	Construction Season	Crossing Location	Field Call	Navigability
08221	4W	0.44	Frozen			
08241	4W	0.39	Frozen			
08281	4W	0.57	Frozen			
08441	4W	0.54	Frozen			
08641	4W	0.38	Frozen			
08881	4W	0.81	Frozen			
10281	4W	0.37	Frozen			
10541	4W	2.62	Frozen			
10661	4W	0.39	Frozen			
10821	4W	0.55	Frozen			
10971	4W	0.71	Frozen			
11421	4W	1.49	Frozen			
11461	4W	0.28	Frozen			
11481	4W	0.22	Frozen			
11641	4W	0.45	Frozen	1154	E	U
11841	4W	1.44	Frozen			
12561	4W	1.05	Frozen	1226	SP	N
12641	4W	0.06	Frozen	1256	E	N
13211	4W	0.54	Frozen			
13461	4W	2.17	Frozen	1488	SP	N
13661	4W	0.92	Frozen			
13941	4W	0.64	Frozen			
14821	4W	0.64	Frozen			
16461	4W	0.74	Frozen			
16581	4W	0.44	Frozen			
16861	4W	1.87	Frozen			
16881	4W	0.68	Frozen			
17981	4W	0.80	Frozen			
Total Class 4W:		36.94				
Total Class 4S:		0.00				
Total Class 4P:		0.00				

In the above table, 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). 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.

Planning Unit 083224

Access Map



1:250000



Alberta-Pacific
Forest Industries Inc.



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, the Alberta-Pacific field offices (Wabasca and Janvier) and the Alberta-Pacific mill site.

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

Aboriginal Consultation

This plan was included in the 2012 - 13 GDP public consultation process.

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 083224:

- 763 - 1425

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 have been notified of Alberta-Pacific's harvest plans within Planning Unit 083224:

- 0163 - 0872 - 0995
- 0401 - 0911
- 0709 - 0956
- 0858 - 0965

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

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

There are no forest aesthetics concerns within this planning unit.

Land Use

There is a Permanent Sample Plot (PSP) located in the southwest corner of Twp. 83-22-4. Any plots that fell within the blocks scheduled for removal have been removed from the harvest design.

PNT 890648 is an active study site within Twp. 83-22-4. A 100m buffer was established on any site that is within the range of the blocks by request of the PNT holder.

Wildlife

This planning unit is within key Caribou Zones. 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 utilized in larger blocks to reduce skidding distances and cycle times. Their use outside of blocks has been minimized to control access and reduce potential wildlife disturbance.

Access has been designed to minimize the disturbance of a wildlife travel corridor that runs from the northwest to the southwest portion of the planning unit. Blocks planned for harvest on the south side of the corridor will be accessed by one of two roads that use existing access.

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.

6. Integration with Affected Forest Companies

Vanderwell and the CTPP currently have no blocks planned within this planning unit.

7. 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	341.2	334.3	62.8	113.8	852.1
FHP SHS Harvest ha.	244.8	271.3	13.7	82.7	614.5
Variance ha. (reportable)	63.9	27.4	41.6	28.3	161.2
Variance % ⁽¹⁾ (reportable)	20.6%	9.2%	75.3%	25.5%	20.8%
Addition ha.	10.9	33.9	6.0	0.0	50.8
Bypassed ha.	0.0	0.0	0.0	0.0	0.0
Total Harvest ha. ⁽²⁾	257.9	305.2	19.6	82.7	665.3

(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 SHS into detailed categories, for Alberta-Pacific harvesting.

Variance Summary – Deleted From Net Landbase

Landbase	Area (ha)
Inventory Inconsistencies	89.1
Watercourse and Body Buffer Changes	3.3
Steep Terrain Removals	0.0
Land Use Changes	7.5
Operational and Isolation Changes	50.3
Public Concerns	0.0
Historical Removals	0.0
Aesthetic Removals	0.0
Sensitive Area Removals	3.1
GPS Anomalies	0.0

Variance Summary – Deferred from SHS

Landbase	Area (ha)
Inventory Inconsistencies	2.6
Public Concerns	0.0
Historical Removals	0.0
Aesthetic Removals	0.0
Isolated Stands	5.4
Structure Retention	0.0
Area Left for Wind Firmness	0.0

Variance Summary – Additions

Landbase	Area (ha)
Stands from the SHS outside of years 1-15	44.8
Stands that were not part of the net Landbase	6.0

8. Silviculture Information

The following table outlines the initial silviculture declarations for FHP blocks within Planning Unit 083224. 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
08322401481	16.3	C	CC	PN	CC
08322401821	42.8	C	CC	SW	CC
08322403281	4.3	DC	CC	MX	CC
08322403451	2.3	D	CC	DE	CC
08322404261	23.5	D	CC	DE	CC
08322404621	5.2	D	CC	DE	CC
08322404781	13.2	CD	CC	MX	CC
08322404841	24.4	D	CC	DE	CC
08322405271	12.9	D	CC	DE	CC
08322405451	19.1	D	CC	DE	CC
08322405481	22.7	D	CC	DE	CC
08322405621	16.2	D	CC	DE	CC
08322405641	3.5	D	CC	DE	CC
08322405821	8.0	CD	CC	MX	CC
08322405841	4.4	D	CC	DE	CC
08322406621	3.4	CD	CC	MX	CC
08322406641	4.6	CD	CC	MX	CC
08322406841	31.9	D	CC	DE	CC
08322406991	2.0	CD	CC	MX	CC

Alberta-Pacific Silviculture Declarations

Source Id	Area	Std_	Open_	Species_	Silv_
	(ha)	Mod	Desig	Gr	Harv
08322407281	13.8	C	CC	SW	CC
08322407421	1.4	D	CC	DE	CC
08322407471	8.9	C	CC	SW	CC
08322407541	8.2	D	CC	DE	CC
08322407661	9.6	C	CC	SW	CC
08322407691	4.6	D	CC	DE	CC
08322407861	2.9	DC	CC	MX	CC
08322408221	12.4	C	CC	SW	CC
08322408241	8.1	D	CC	DE	CC
08322408281	11.3	C	CC	SW	CC
08322408441	6.3	C	CC	SW	CC
08322408641	2.7	C	CC	SW	CC
08322408881	6.0	CD	CC	MX	CC
08322410281	1.4	D	CC	DE	CC
08322410441	4.0	D	CC	DE	CC
08322410541	27.3	C	CC	SW	CC
08322410661	6.0	C	CC	SW	CC
08322410821	5.9	C	CC	SW	CC
08322410971	32.9	C	CC	FA	CC
08322411421	24.6	C	CC	FA	CC
08322411461	3.8	D	CC	DE	CC
08322411481	19.0	CD	CC	MX	CC
08322411641	9.2	D	CC	DE	CC
08322411741	6.5	C	CC	SW	CC
08322411841	14.6	D	CC	DE	CC
08322412561	5.9	C	CC	SW	CC
08322412641	13.7	C	CC	PN	CC
08322413211	15.1	D	CC	DE	CC
08322413461	40.6	CD	CC	MX	CC
08322413661	6.5	D	CC	DE	CC
08322413861	15.9	C	CC	PN	CC
08322414821	23.9	C	CC	SW	CC
08322416381	3.2	D	CC	DE	CC
08322416461	5.4	CD	CC	MX	CC
08322416581	6.0	C	CC	SW	CC
08322416861	7.4	D	CC	DE	CC
08322416881	7.0	C	CC	SW	CC
08322417221	6.9	C	CC	SW	CC
08322417981	3.0	CD	CC	MX	CC
08322418621	21.7	C	CC	SW	CC
08323413941	45.0	C	CC	SW	CC

In the above two tables, 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.

9. OGRs Variances

Blocks

The lake bordering the southwest boundary of Block 01821 is less than 4.0 hectares in size and is over 100m away. No buffer points were taken.

SHS Tracking

SHS Tracking	Decid. Cover Type	Sw Cover Type	Sb Cover Type	Pj Cover Type	Total Cover Type
Total SHS in Planning Unit	341.2	334.3	62.8	113.8	852.1
FHP SHS Harvest ha.	244.8	271.3	13.7	82.7	614.5
Variance ha. (reportable)	63.9	27.4	41.6	28.3	161.2
Variance % ⁽¹⁾ (reportable)	20.6%	9.2%	75.3%	25.5%	20.8%
Addition ha.	10.9	33.9	6.0	0.0	50.8
Bypassed ha.	0.0	0.0	0.0	0.0	0.0
Total Harvest ha. ⁽²⁾	257.9	305.2	19.6	82.7	665.3

(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 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
08322407471	6	Block is long and narrow.
08322407541	6	Block has access to other blocks.
08322407661	6	Block has access to other blocks.
08322408281	5	Block is irregularly shaped and has access to other blocks.
08322410281	10	Block is small and irregularly shaped.
08322411841	5	Block is irregularly shaped and has access to other blocks.
08322416861	5	Block is irregularly shaped.

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

Roads

Road Comments

Road No.	Class	Comments
04261	4W	This road is within 200m of a lake.
05271	4W	This road is within 100m of a small permanent stream. This road is within 200m of a lake.
06841	4W	This road is within 200m of a lake.
07421	4W	This road is within 200m of a lake.
08281	4W	This road is within 200m of a lake.
13941	4W	This road is within 100m of a small permanent stream. This road is within 30m of an intermittent creek.

Roads Close to Watercourses

Road No.	Grid Location	Base Info	Field Call	Distance of Watercourse From Road	Habitat Rating
04261	0416	LL	LL	200	U
05271	0697	E	SP	100	U
06841	0676	LL	LL	200	U
07421	0733	LL	LL	200	U
08281	0818	LL	LL	200	U
13941	1318	E	SP	100	U
	1328	UM	I	30	U

The “Distance of Watercourse From Road” is the minimum distance allowed in Table 2 of the OGRs without ASRD 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), lake \geq 4 ha (LL) or unmapped (UM). The possible “Field Call” watercourse classifications are intermittent (I), transitional (T), small permanent (SP), large permanent (LP), lake < 4 ha (SL), lake \geq 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.