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Forest Harvest Plan

Planning Unit 076044



Alberta-Pacific
Forest Industries Inc.

Forest Harvest Plan

Planning Unit 076044

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FHP Checklist

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Report

1- Introduction

Alberta – Pacific Forest Industries Inc. (Alberta – Pacific) has prepared a Forest Harvest Plan (FHP) for the harvest area within Planning Unit 076044. Planning Unit 076044 is located within Forest Management Unit (FMU) L11, north of Winefred Lake, and Winefred Lake Indian Reserve 194B.

This plan has been prepared to harvest deciduous stands within the 076044 planning unit area. Copies of this planning unit are available on the Alberta – Pacific website, at www.alpac.ca

Alberta – Pacific holds the active timber disposition FMA9100029. There are no other commercial timber disposition holders within the FMU.

2- General Planning Unit Information /Design Considerations

The FHP has been validated by Alberta-Pacific planning staff, a Registered Professional Forest Technologist (RPFT) number 200020.

The harvest design does not incorporate any spatial harvest sequence (SHS) stands. Additions, deletions, and deferrals from the current 2006 SHS have been tracked and are included in this report under the *SHS Variances* section.

The Chipewyan Prairie First Nation community contacted Alberta – Pacific requesting assistance in planning an access road to First Nation Reservation 194B, located on the North side of Winefred Lake.

During this process, a significant area of deciduous timber was identified in the area. An area of concern for local communities is increased traffic on existing roads, currently used by residents. To minimize the potential conflicts of log hauling operations and local traffic as the access to the Winefred Lake community is developed and local traffic increases, this harvest plan has been developed with the intent of harvesting the area and removing the timber prior to the construction of the Winefred Lake community access.

With the development of this plan, the Chipewyan Prairie First Nation community has been consulted, including a flight of the area, to identify the best location for a road corridor, and an area of significant traditional land use for the community.

The traditional land use area has been removed from block 07604427821. Furthermore, a historic trail in the area, also identified by the Chip Prairie Band has been removed from the block design. The roads have also been designed in a manner to avoid crossing the trail; to maintain the integrity of the trail and minimize visual impacts along the trail while the adjacent cut-block regenerates.

Approval/Appraisal

Alberta – Pacific is submitting this planning unit for appraisal, under the current Annual Operating Plan (AOP). The total harvest area exceeds 100% of the SHS within the planning unit boundary, as there is no SHS within the plan.

Operating Ground Rules

Planning unit 076044 has been designed to adhere to the Northeast Alberta Operating Ground Rules (OGRs), revised 2014. Alberta – Pacific is requesting certain deviations from the OGRs, due to field verified factors. These requests, along with corresponding information are listed under the section *OGR Deviations*.

3- Maps

Individual block maps have been included in the submission package, outlining the information pertinent to these blocks. A planning unit overview map, and a SHS planning unit map have been included in the submission package. These maps can be viewed in the *Appendices* of this document.

4- Block Information

A *Block Summary Table* has been included below, outlining the expected volumes of the harvest area.

Alberta – Pacific adheres to the 15/10 utilization standard for deciduous stands, and 15/11 standard for coniferous stands.

Field verification

The proposed blocks were ground verified by a field layout team during the summer of 2017. The layout team provided planning support to assess the timber quality, sensitive and historical sites, operability of the harvest area, and the classification of water courses within the planning unit boundary. Where applicable, the findings of the layout team have been noted in the corresponding section of this report.

Understory Assessment

White Spruce understory will be protected in stands identified as greater than 600 stems/ha by the Alberta Vegetation Inventory (AVI), as well as any potential areas found to have understory present not identified by the AVI. Any blocks found to have understory amounting to between 400 stems/ha and 600 stems/ha will be protected through the avoidance method.

Blocks identified as needing understory protection or understory avoidance are noted within the *Block Summary Table*.

Block Summary Table

(Values rounded to whole numbers)

<i>SourceID</i>	Opening Number	Open Type	Harvest Season	Area (ha)	Decid Volume	Conif Volume	Inc Conif	Total Volume
07603419221	4030761922	CC	F	16	3,488	127	168	3,783
07603419391	4030761939	CC	F	4	700	51	75	826
07603419771	4030761977	CC	F	9	2,029	0	189	2,218
07603429391	4030762939	CC	F	1	79	82	-	161
07603430121	4030763012	CC	F	2	277	0	119	396
07603430431	4030763043	CC	F	2	220	0	24	245
07603430631	4030763063	CC	F	5	778	0	162	939
07603430711	4030763071	CC	F	4	544	0	182	726
07603430991	4030763099	CC	F	28	5,656	86	1,473	7,214
07603431331	4030763133	CC	F	13	2,619	402	333	3,353
07603432421	4030763242	CC	F	5	1,048	31	87	1,166
07603432621	4030763262	CC	F	4	1,092	1	34	1,127
07603433331	4030763333	PC	F	85	16,501	387	872	17,760
07603433711	4030763371	CC	F	4	621	69	17	708
07603433891	4030763389	PC	F	8	1,484	13	158	1,654
07604422181	4040762218	CC	F	27	5,713	97	645	6,455
07604422711	4040762271	CC	F	4	873	0	28	902
07604422831	4040762283	CC	F	3	804	0	25	829
07604424161	4040762416	CC	F	212	52,897	864	1,628	55,390
07604424921	4040762492	CC	F	3	274	0	118	392
07604425181	4040762518	PC	F	5	1,083	36	33	1,153
07604425471	4040762547	CC	F	8	1,762	15	54	1,831
07604426721	4040762672	CC	F	1	239	1	7	248
07604427821	4040762782	CC	N	237	53,351	712	4,311	58,374
07604428911	4040762891	CC	F	2	608	0	19	627
07604436421	4040763642	CC	F	4	1,065	7	33	1,105
Total				697	155,807	2,982	10,793	169,582

Table 1: Block Summary Table – This table provides a brief description of the proposed harvest blocks within the planning unit. Blocks 07603429391, 07603430121 are to be harvested as conifer blocks.

Structure Retention

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

- Laid out patches
- Individual trees
- Small clumps left at the operators' discretion

Retention Areas

(Values rounded to whole numbers)

<i>RetentionID</i>	Area (ha)	Decid. Volume	Conif. Volume	Inc. Conif.	Total Volume
<i>07603419119</i>	4	1,016	0	31	1,047
<i>07603432949</i>	5	1,391	0	43	1,434
<i>07603433239</i>	4	1,189	0	131	1,320
<i>07604424149</i>	1	14	111	0	125
<i>07604425419</i>	2	652	0	20	672
<i>07604425619</i>	2	586	0	18	605
<i>07604427849*</i>	3	638	0	169	807
Total	22	5,486	111	412	6,009

Table 2: Retention areas - This table provides a brief description of the proposed harvest blocks within the planning unit.

*Retention block 07604427849 is a proximal retention patch. A pipeline bisects block 07604427821, the retention patch has been placed in this location to minimize building additional road north of the pipeline to avoid long skid distances. The removal of the pipeline created block boundary along the southern edge of the retention patch, if no pipeline existed the patch would have been an interior patch.

Debris Management

Planning unit 076044 is situated within Alberta's Fire Control Zone number 42 as identified by Alberta Agriculture and Forestry (AAF). The FHP does not fall within either of the FireSmart community zones outlined in the Fire Control Zone.

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

5- Watercourse Protection

During the preliminary planning of planning unit 076044, potential watercourses were identified using wet areas mapping, lidar data, aerial imagery, as well as the available AVI data.

Where harvest blocks are in proximity to any potential watercourses, the field layout team conducted field assessments utilizing the methodology and classification standards outlined in the OGRs Section 6.0 Figure 1 and Table 1. Any confirmed watercourses have been buffered in accordance with the OGRs Section 6.0 Table 2.

The Fisheries and Wildlife Management Information System (FWMIS) has confirmed the presence of fish-bearing watercourses in this unit including the Winefred River and its tributaries. All watercourses within the planning unit have been treated as fish bearing.

There are no class A or class B watercourses identified within this unit.

Any deviations from the OGRs in relation to the watercourse buffers are noted in this report. Please refer to the *OGR Deviations* section of the report.

Watercourse Crossing Summary Table

Road ID	Watercourse Classification	Crossing Type	Crossing ID
07603419391	Ephemeral	Snow Fill	3011
07603419771	Ephemeral	Snow Fill	1968
07603430121	Ephemeral	Snow Fill	2572
07603430431	Ephemeral	Snow Fill	3034
07603430631	Ephemeral	Snow Fill	3084
		Snow Fill	3085
		Snow Fill	3094
07603430711	Ephemeral	Snow Fill	3061
07603432621	Ephemeral	Snow Fill	3252
07603433231	Ephemeral	Log Fill	3311
		Culvert	3355
		Log Fill	3356
		Culvert	3366
	Small Permanent	Culvert	3377
	Ephemeral	Log Fill	3378
07603433891	Ephemeral	Log Fill	3399
07604422181	Ephemeral	Snow Fill	2166
	Transitional	Culvert	2176
		Snow Fill	2186
	Ephemeral	Snow Fill	2731
		Snow Fill	2884
07604422711	Ephemeral	Culvert	2265
		Culvert	2271

		Culvert	2272
		Culvert	2275
		Log Fill	2281
07604424161	Ephemeral	Snow Fill	2416
		Snow Fill	2427
		Snow Fill	2437
	Large Permanent	Snow Fill	2934
	Small Permanent	Snow Fill	2935
	Large Permanent	Bridge	2936
	Small Permanent	Snow Fill	3239
07604425181	Ephemeral	Snow Fill	2669
		Snow Fill	3561
		Snow Fill	3581
07604427821	Ephemeral	Log Fill	2319
		Culvert	2625
		Culvert	2635
		Log Fill	2642
		Culvert	2764
		Culvert	2798
	Transitional	Culvert	3367
07604428911	Small Permanent	Snow Fill	2872
		Bridge	2873
		Snow Fill	2874
07604436421	Ephemeral	Snow Fill	3662

Table 3: Watercourse Road Crossings - A list of road crossings over field verified watercourses within the planning unit.

6- Road Information

Temporary class iv roads will be constructed, maintained, and reclaimed in a manner that will minimize the potential environmental impacts of the harvest area.

Other users in the area which may be affected during the operations stage of this planning unit are primary industrial users (Oil and Gas/Forestry). Where any high grade industrial access is existing, it has been included in the harvest design if possible.

When new access is necessary, reclamation processes will adhere to Section 11.3.4 of the OGRs. To enable silviculture activities, all-terrain vehicle (ATV) access may be left throughout the harvest area.

As per Section 3.4.6 of the OGRs, all inter-block roads, and crossing information will be included on the overview map for the planning unit; all spatial data requirements have also been included with this submission.

Road Attributes Table

(Values rounded to whole numbers)

Road ID	Class	Season	Length (m)
07603419221	IV Temp	F	1,606
07603419391	IV Temp	F	504
07603419771	IV Temp	F	962
07603424921	IV Temp	F	46
07603430121	IV Temp	F	592
07603430431	IV Temp	F	1,644
07603430631	IV Temp	F	1,705
07603430711	IV Temp	F	518
07603430991	IV Temp	F	1,622
07603431331	IV Temp	F	2,246
07603432421	IV Temp	F	527
07603432621	IV Temp	F	554
07603433331	IV Temp	F	5,097
07603433711	IV Temp	F	451
07603433891	IV Temp	F	651
07604422181	IV Temp	F	3,246
07604422711	IV Temp	F	1,099
07604422831	IV Temp	F	477
07604424161	IV Temp	F	14,614
07604424921	IV Temp	F	285
07604425181	IV Temp	F	2,069
07604425471	IV Temp	F	705
07604426721	IV Temp	F	222
07604427821	IV Temp	N	12,572
07604428911	IV Temp	F	2,673
07604436421	IV Temp	F	2,033
Total			58,745

Table 4: Road Information - Summary of the proposed inter-block roads of the planning unit.

7- Land Use Information

Agreements

A search of the Land Status Automated System (LSAS) and of Digital Integrated Dispositions (DIDs) yielded active dispositions within the FHP harvest area. Any necessary agreements with the disposition holder will be in place prior to the

commencement of harvest operations. None of the dispositions within the FHP harvest area will restrict harvest operations of the FHP.

Land Use Summary Table

<i>Disposition Number</i>	Disposition Holder	Disposition Type
<i>LOC030282</i>	Cenovus	License of Occupation
<i>LOC030283</i>	Cenovus	License of Occupation
<i>LOC070226</i>	MEG Energy	License of Occupation
<i>LOC100049</i>	Cenovus	License of Occupation
<i>LOC141403</i>	Cenovus	License of Occupation
<i>LOC901425</i>	Cenovus	License of Occupation
<i>LOC982141</i>	MEG Energy	License of Occupation

Table 5: Disposition Information - Active dispositions in the planning unit

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

8- Integration with Other Forest Users

Integration with Other Harvest Operators

Within the FMU, there are no other coniferous operators, as noted in the Introduction to this report. Integration with other harvest operators is therefore not a possibility.

Registered Fur Management Areas (RFMAs)

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

Trappers have also been personally contacted regarding this FHP to gather feedback. To date, no concerns have been identified.

Trapper Areas Table

RFMA Number

0615

0668

1595

Table 6: RFMA Information - RFMA holders affected by harvest operations.

Wildlife Management Unit(s) (WMU)

Planning unit 076044 falls within WMU 517. The Guide and Outfitters operating within this unit have received notification, via registered mail, on the FHP design, as well as a timeline for the commencement of harvest operations. Any requests from Guides and Outfitters have been considered, and, where possible, the harvest design has been planned to accommodate the request.

Guide and Outfitters Table

OG ID Number

378 G

541 G

732 G

1058 G

Table 7: Guide and Outfitters - List of Guide and Outfitters active in WMU 517.

Aboriginal Groups

The Southern Portion Planning Unit boundary runs adjacent to the Northern boundary of the Winefred Lake Reservation – Number 194B.

During the General Development Plan (GDP) process, Alberta – Pacific completes a consultation with aboriginal groups every year. There have not been any issues identified for the Planning Unit 076044 FHP submission.

Other Forest Users

There are no other forest user groups operating within the area, however Winefred Lake sees many recreational users. The harvest blocks within the harvest area, will not be visible from Winefred Lake.

Forest Aesthetics

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

9- Species and Areas of Concern

Woodland Caribou

The planning unit is within both the Cold Lake, and Christina Lake Caribou Ranges. Where possible, access roads will follow existing disturbances, in accordance with Section 7.7.1 of the OGRs. Most of the planning unit will be harvested in frozen ground conditions, to mitigate ground disturbance due to operational concerns.

Alberta – Pacific will be reclaiming all existing access within the planning unit to reduce the industrial footprint in this area. Any access in the planning unit, held under a Public Lands disposition may be reclaimed, assuming the owner(s) have no further use for the disposition. Alberta – Pacific will be continually discussing the reclamation with affected companies throughout the operations of this FHP.

Key Wildlife and Biodiversity Zone (KWBZ)

The planning unit is not within, or in proximity to any identified KWBZ.

Other Species

During field verification of the FHP, stick nests of unknown species were identified. These nest sites were buffered in accordance with Section 7.7.6 of the OGRs, and have been placed into retention areas (RAs). Below is a list of the sites, and their corresponding ID.

The FWMIS search conducted, did not yield any results regarding terrestrial wildlife that require any special considerations for harvest operations.

Wildlife Buffer Retention Areas

Retention ID	Reasoning
07603419119	Stick nest discovered during field verification. Species could not be determined.
07603432949	Stick nest discovered during field verification. Species could not be determined.

Table 8: Wildlife Retention -Retention areas created due to wildlife buffers.

Please refer to the *Retention Areas* Table for more information pertaining to these blocks.

Sensitive Sites - Historical Resources

A review of the block design, and landscape of the FHP was completed by archaeologist contractors. Any sites identified as being of high historical significance (historical resource sites), have been removed from the harvest design. In any instances where these areas could not be removed, all operations will be conducted during frozen conditions, to preserve the significance of the site.

Upon completion of field verification, a second review of the harvest blocks, and temporary class iv roads were conducted to identify potential conflicts, and to determine any required changes.

Forest Health

During the field verification of the FHP harvest area, the verification team evaluated the current state of the forest health in the FHP harvest area, as outlined in Section 10.1 of the OGRs. There were no signs of rare plants, or diseases identified, including no signs of terrestrial lichen.

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

10- SHS Information / Variance Summary

Variations from the SHS within the harvest area boundary are shown in the *Spatial Harvest Sequence Summary Table*.

Spatial Harvest Sequence Summary Table

(Values rounded to whole numbers)

SHS Variance – Planning Unit Summary	Cover Type				Total
	Decid	Sw	Sb	Pj	
<i>Total SHS(ha) in Planning Unit*</i>	708	5	0	7	720
<i>SHS Area (ha)Planned for Harvest</i>	0	0	0	0	0
<i>Negative Variance -Deletions (ha)</i>	0	0	0	0	0
<i>Negative Variance – Deferrals (ha)</i>	708	5	0	7	720
<i>SHS Variance %</i>	100	100	100	100	100
<i>Positive Variance -Additions (ha)</i>	703	7	0	9	719
<i>Bypassed SHS (ha)</i>	0	0	0	0	0
Total Harvest Area (ha)	703	7	0	9	719

Table 9: Variance Information - Planning unit SHS variance summary.

*The calculations above have been based off SHS values deferred outside of the planning unit boundary. The SHS has been deferred from township 084-07-4. Please refer to the *General Planning Unit Information* section of this document for information regarding the design of this FHP.

11- Silviculture Information

The following table provides information on the initial silviculture declarations for the proposed harvest blocks. Any silviculture information not present within the table will be submitted post-harvest.

Preliminary Silviculture Information

SourceID	Opening Number	Area (ha)	LandBase Desig.
07603419221	4030761922	16	ALPC0513
07603419391	4030761939	4	ALPC0513
07603419771	4030761977	9	ALPC0513
07603429391	4030762939	1	ALPC0519
07603430121	4030763012	2	ALPC0518
07603430431	4030763043	2	ALPC0513
07603430631	4030763063	5	ALPC0513
07603430711	4030763071	4	ALPC0513
07603430991	4030763099	28	ALPC0513
07603431331	4030763133	13	ALPC0513
07603432421	4030763242	5	ALPC0513
07603432621	4030763262	4	ALPC0513
07603433331	4030763333	85	ALPC0514
07603433711	4030763371	4	ALPC0513
07603433891	4030763389	8	ALPC0514
07604422181	4040762218	27	ALPC0513
07604422711	4040762271	4	ALPC0513
07604422831	4040762283	3	ALPC0513
07604424161	4040762416	212	ALPC0513
07604424921	4040762492	3	ALPC0518
07604425181	4040762518	5	ALPC0514
07604425471	4040762547	8	ALPC0513
07604426721	4040762672	1	ALPC0513
07604427821	4040762782	237	ALPC0513
07604428911	4040762891	2	ALPC0513
07604436421	4040763642	4	ALPC0513

Table 10: Silviculture Information - Preliminary Silviculture information for the planned harvest blocks.

12- OGR Deviations

Blocks

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

Block Road Percentages (Values rounded to whole numbers)			
Source ID	Opening Number	Road Percent	Reasoning
07603419221	4030761922	7	Access to Additional Blocks.
07603419771	4030761977	6	Access to Additional Blocks.
07603430631	4030763063	8	Access to Additional Blocks.
07603432421	4030763242	7	Access to Additional Blocks.
07603433331	4030763333	6	Road required for Understory Protection.
07603433891	4030763389	6	Road Required for Understory Protection.
07604422181	4040762218	6	Road required due to terrain within block.
07604425471	4040762547	5	Road required due to irregular shape of block.

Table 11: Blocks which may require roads exceeding the allotted 5% block disturbance.

Roads

The road design for the planning unit passes close to watercourses (less than 200 meters) in several locations due to the proximity to Winefred River. The roads, and the grid locations are noted in the following table.

Roads Near Watercourses	
Road Number	Grid Reference
07603430991	3097
07603431331	3124
07604425181	2517
07604426721	2662
07604427821	2327 & 3366
07604436421	3642

Table 12: Roads Constructed Near Watercourses.