BASSET - 5 FOREST HARVEST PLAN FMU F26

Abstract

A report and map clearly documenting and showing the harvest area boundaries, roads and watercourse crossings for the compartment. A Forest Harvest Plan is valid for five years from the time of approval, unless issues deemed significant by Alberta arise.

Submission: October 10, 2018

TABLE OF CONTENTS

IN	TROD	UCTION	.3
1	SUE	MISSION SUMMARY	.3
	1.1	REGISTERED FOREST PRACTITIONER VALIDATION	.3
	1.2	ADDITIONS EXCEED 20% OF AREA SEQUENCED BY STRATA GROUP	.3
	1.3	ADDITIONS NOT EXCEED DELETIONS AND DEFERRALS BY STRATA GROUP	.3
	1.4	EXCEEDS 100% OF AREA SEQUENCED BY STRATA GROUP	.4
	1.5	ADHERES TO THE OPERATING GROUND RULES	.4
2	CON	IPARTMENT ASSESSMENT	.4
3	MAF	PS	.4
	3 1	RI OCK MARS	Л
	3.2	FOREST HARVEST PI AN OVERVIEW MARS	۰- ۵
	3.3	FOREST HARVEST PLAN VARIANCE SUMMARY MAP	۰. ۵
4	BI C		 л
-			. 4
	4.1		.4
	4.2	UNDERSTORY	.4
	4.2.	I Merchantable Retention	.5
	4.2.4		.5
	4.3	SOIL PROTECTION MEASURES	.6
	4.4		. 6 6
	4.5		. 6 6
	4.0	DETAILED HADVEST ADEA DI ANS	0. م
	4.7 1 8	WATED TABLE	0. 7
-	4.0 TEN		. /
J			./
	5.1	ROAD CLASSIFICATION	.7
	5.2	ROAD PLANNING AND DESIGN	.7
	5.2.	1 Protection of Roadside Vegetation	.7
	5.2.2	2 Minimizing Line of Sight	.8
	5.3	ROAD CONSTRUCTION	.8
	5.4	ROAD MAINTENANCE (EROSION CONTROL/PREVENTION)	.8
	5.5		.8
	5.5.	1 Seasonal Reclamation	.8
	5.5.2	2 Partial Reclamation	.8
	5.5.	3 I Otal Reclamation	.8
	5.6	WATERCOURSE CROSSINGS	.8
	5.0.	Access Control	.9
	5.7		.9
	ວ.Ծ 5.0		.9 2
	5.9 F 0	AGREEMENIS	.9
	5.9.	I RUAU USE AYIEEIIIEIIIS	.9 م
	5.9.4 E 0 1	2 Fipeline Crossing Agreements	9. م
	5.9.	o rowenine crossing Agreentenis	.9 10
	5.9.4	τη Πημηναγ Αμμισαυτικό Special Access Zone	10 10
	5.10		10 10
	0.11		10



6	SPA	TIAL HARVEST SEQUENCE	10
	6.1 6.2 6.3 6.4	VARIANCE SUMMARY UNPLANNED ADDITIONS DELETIONS AND DEFERRALS	10
7	INTE	EGRATION WITH OTHER USERS	14
8	7.1.2 7.1.2 7.1.2 7.1.4 7.1.6 7.1.6 7.1.7	 Deciduous and Coniferous Integration	
	8.1 8.2 8.3 8.4 8.5 8.6 8.7	Woodland Caribou GRIZZLY BEAR TRUMPETER SWAN KEY WILDLIFE AND BIODIVERSITY ZONES ARCTIC GRAYLING OTHER SPECIES. HIGHLY SENSITIVE AREAS (ELEMENTS OF BIODIVERSITY OCCURRENCES (EO))	
9	APP	PENDIXES	17

TABLE OF TABLES

TABLE 1:	OTHER DISPOSITIONS SUMMARY	.6
TABLE 2:	SPATIAL HARVEST SEQUENCE SUMMARY	12
TABLE 4:	REGISTERED FUR MANAGEMENT AREAS	15

TABLE OF APPENDEXES

APPENDIX 9-1: BLOCK SUMMARY	
APPENDIX 9-2: ROAD SUMMARY	
APPENDIX 9-3: CROSSING SUMMARY	20
APPENDIX 9-4: BLOCK MAPS	21
APPENDIX 9-5: FINAL HARVEST PLAN OVERVIEW MAP	
APPENDIX 9-6: FINAL HARVEST PLAN APPROVAL(S)	







INTRODUCTION

The Basset-5 Forest Harvest Plan located within Forest Management Unit F26, has been prepared by Tolko Industries Ltd., Norbord Inc., and La Create Sawmills Ltd. (the Companies). Additional Information regarding the Companies and a copy of approved Forest Harvest Plans are located on the High Level Woodlands website (<u>www.highlevelwoodlands.com</u>). Forest Harvest Plans are submitted to Alberta Agriculture and Forestry (Alberta) by the Companies throughout the timber year. The purpose of a Forest Harvest Plan is to articulate in detail the laid out blocks, roads, and watercourse crossings within a compartment.

The compartment spans both the central mixed wood and lower boreal highlands natural sub regions. The central mixed wood is comprised of vast upland forests and wetlands over flat terrain. The lower boreal highlands are also comprised of mixedwood forests but has more extensive wetlands at slope bases and in lowland areas.

The Basset-5 compartment is comprised of conifer, mixedwood, and deciduous stand types. This Forest Harvest Plan addressed conifer, mixedwood, and deciduous cover types from the 2016 Spatial Harvest Sequence. The conifer landbase within the Spatial Harvest Sequence is predominantly white spruce leading stands; the deciduous landbase within the Spatial Harvest Sequence is predominantly trembling aspen leading stands. The terrain is level with elevated slopes along watercourses. Road design has accounted for terrain features and watercourse locations and utilized existing linear disturbances where possible.

There is little harvest history in the Basset-5 compartment, the most recent being in 2011.

This Forest Harvest Plan contains text, tables, maps (block and overview), and spatial data of harvest area boundaries, roads, and watercourse crossings. Reasonable efforts have been made to ensure the information presented in the various formats is consistent and correct. The Companies are requesting Alberta's Forest Harvest Plan approval utilize the spatial data submitted as per the Forest Harvest Plan/Annual Operating Plan/As-built Spatial Data Submissions Directive as the authoritative source for harvest area boundaries, roads, and watercourse crossings.

1 SUBMISSION SUMMARY

A Forest Harvest Plan Checklist is included in the submission to Alberta.

1.1 Registered Forest Practitioner Validation

This Forest Harvest Plan is validated by a Registered Forest Practitioner.

1.2 Additions Exceed 20% of Area Sequenced By Strata Group

This Forest Harvest Plan adds more than 20% of area sequenced in the 1-10 Year Spatial Harvest Sequence by compartment by 16 yield strata used in the Detailed Forest Management Plan.

See Section 6 for additional information.

1.3 Additions Exceed Deletions and Deferrals By Strata Group

The area of substantial additions does exceed the sum of the deletions and deferrals as sequenced in the 1-10 Year Spatial Harvest Sequence by compartment by 16 yield strata used in the Detailed Forest Management Plan.

See Section 6 for additional information.







1.4 Exceeds 100% of Area Sequenced By Strata Group

Area within the Forest Harvest Plan and Harvested exceeds 100% of the Spatial Harvest Sequence by Strata.

See Section 6 for additional information.

1.5 Adheres to the Operating Ground Rules

This Forest Harvest Plan was prepared in accordance with the 2016 Forest Management Plan, the 2016 Spatial Harvest Sequence, and the Upper Hay Regional Timber Harvest Planning and Operating Ground Rules – June 12th, 2015 (Operating Ground Rules). The following identifies a summary of the requested deviations where the Operating Ground Rules could not be achieved, these deviations have been noted by block in Appendix 9-1:

• Temporary roads, more than 5%, due to small size of block, narrow and irregular shape and/or access required to other blocks

2 COMPARTMENT ASSESSMENT

Alberta has not requested a Compartment Assessment be completed for the Basset-5 Compartment.

3 MAPS

3.1 Block Maps

A Block Map has been created for each block, showing the required information as per Operating Ground Rule 3.4.5. Information not displayed at the block level will be included on the Overview Map, see Appendix 9-4.

3.2 Forest Harvest Plan Overview Maps

A Forest Harvest Plan Overview Map has been created for the compartment, see Appendix 9-5.

3.3 Forest Harvest Plan Variance Summary Map

A Forest Harvest Plan Spatial Harvest Sequence Variance Summary Map has been created for the compartment, see Appendix 9-5.

4 BLOCKS

A summary of the blocks within the Forest Harvest Plan are in Appendix 9-1 and induces block comments.

4.1 Field Verification

Field layout of the proposed blocks, and roads took place over the summer of 2018. Forest health, timber quality, sensitive areas, operability, as well as the presence and field classification of creeks within and adjacent to blocks was assessed. Tolko Industries has implemented ribbonless layout in this compartment.

4.2 Understory

Understory protection will be practiced within the conifer landbase and understory avoidance will be practiced within the deciduous landbase as per the Operating Ground Rules.





During field verification, there were no stands identified requiring understory protection. A minimum of 50% of acceptable trees in the understory will be retained without harvest damage should understory be noted during harvest operations. The Area Supervisors and Logging Contractors will evaluate the understory to minimize damage. Acceptable stems will be determined as per the Operating Ground Rules. In addition, the Companies are requesting balsam fir not be considered an acceptable species due to the species inability to survive once a stand is opened.

4.2.1 Merchantable Retention

Merchantable structure retention will be maintained at the landscape level. Deciduous and Coniferous volume retained will charged against the Annual Allowable Cuts and reported in the General Development Plan. An average of 3% of the standing merchantable coniferous and deciduous volume retained will be representative of pre-harvested stands. Retention will be calculated from single stems, clumps, islands, and standing trees along in-block creeks and standing trees along block edge within the sequenced boundary.

Merchantable retention is to be representative of the block and should target areas such as:

- understorey conifer and advanced regeneration
- Standing larch, black spruce, poor form pine and shrubs
- Wet areas, especially those with surface water and pools, or near ephemeral or intermittent watercourses
- Standing snags with no safety concerns
- Large diameter trees of high wildlife value and poor timber value
- Previous blowdown areas containing dead and damaged timber, or areas susceptible to blowdown
- Distance to wildlife hiding cover can be reduced (i.e. large blocks)
- Sensitive to disturbance, such as steep slope areas, or problematic soil features
- Identified non-timber values (i.e. trapper cabins, historical resources, aesthetic values)
- Adjacent to non-merchantable retention

The minimum retention patch size is 0.5 ha. Areas this size and larger are more easily mapped, provide better thermal cover and protection value to wildlife, and are more wind-firm. When scattered individual trees are used to meet retention objectives they should be merchantable and meet the conifer and deciduous utilization parameters.

4.2.2 Non-Merchantable Retention

In addition to merchantable volume, non-merchantable areas within harvested blocks will be retained for further structure. Areas within the proposed harvest blocks may be left to contribute to specific residual structure retention strategies outlined within the Operating Ground Rules and the Forest Management Plan. For the purposes of the variance reporting and company operating procedures, these retention patches may be removed from the proposed harvest block and contribute to the spatial harvest sequence variance as a deletion. Typically, patches are identified through the use of aerial photography, the Lidar Canopy Height Model, and during field verification. Non-merchantable retention patches or trees are areas of:

- Wet areas with surface water and pools
- Lesser vegetation
- Larch, Balsam Fir, and/or poor-form trees
- Standing dead, broken, or decaying trees
- Unique flora, hydrological, or terrain features







4.3 Soil Protection Measures

Blocks and road design within sensitive areas have mitigated the potential environmental impact from harvest and silviculture activities through the following methods:

- operations will occur under frozen conditions,
- planned areas with primary consideration to terrain features, such as avoidance of slumping/seepages, minimizing cut/fill in road design, and minimize long term disturbance by reducing multiple entries,
- buffer applied to watercourses and sensitive areas as per the Operating Ground Rules and companies Environmental Monitoring Systems and Certification Standards (i.e. SFI)
- designed roads to avoid sensitive areas and minimize disturbance and watercourse crossings,
- designed blocks using most current technology and planning tools, such as Lidar, 3-D imagery, current photo imagery, and
- field verification of roads within sensitive locations

The blocks and roads within this Forest Harvest Plan do not overlap within known areas of permafrost, as per the government data set. Should permafrost be identified during operations the Operating Ground Rules will be followed, specifically 9.11 and 9.12.

4.4 Forest Health

There are currently no known significant diseases or insect infestations in the Basset-5 compartment. The Companies will continue to monitor for forest pests and adjust future plans if required.

The Preferred Forest Management Strategy Plan identified the stands within Forest Management Unit to be on the over mature and in decline, as the age class distribution is near the maximum. The Spatial Harvest Sequence has been modeled to minimize loss of timber within stands.

4.5 Debris Management

There are no blocks which fall within the 10-kilometer community zone. Debris disposal will be in accordance with the Operating Ground Rules.

4.6 Non-Industrial Dispositions

The Land Status Automated System and DIDs was reviewed for current dispositions. A summary of non-industrial dispositions within the extent of the harvest areas are identified in Table 1.

Number	Holder	Blocks and Roads within Disposition	Comment
ISP070046			This ISP is 2km from nearest block and will not be disturbed.

Table 1: Other Dispositions Summary

4.7 Detailed Harvest Area Plans

There are no blocks within this Forest Harvest Plan that have been identified as requiring a Detailed Harvest Area Plan map.







In general, the following triggers the submission of a Detailed Harvest Area Plan Map:

- Operating Ground
 Block size
 Rule Variance
- Steep terrain
- Complex or substantial surface drainage patterns within or adjacent to the block
- Smaller map scale to show block details
- Blocks requiring additional clarification of block design

4.8 Water Table

The Companies are committed to maintaining the productive landbase to support the growth of future forests, as per 7.2.4 of the Operating Ground Rules. The following measures are taken to manage reforestation success:

- During block design remove non-merchantable areas of the Spatial Harvest Sequence.
- During layout indicator species are noted that suggest the possibility of a high amount of available soil moisture. Areas supporting indicator species are noted and may be excluded from the block boundary or incorporated into the silviculture plan (site preparation or planting techniques).
- Upon availability, utilize the Wet Areas Mapping during block design and layout.
- Committed to the Reforestation Monitoring Program, as outlined in the 2016 Forest Management Plan. This includes the review of regeneration results of not-satisfactory restocked plots in areas larger than 4ha.

5 TEMPORARY CLASS IV ROADS

The objective for road design within this Forest Harvest Plan is to:

- Comply with the Operating Ground Rules, specifically section 11,
- Utilize existing linear disturbances,
- Minimize overall area of disturbance,
- Minimize the number of watercourse crossings,
- Minimize haul distance, and
- Maximize the number of blocks accessed per road.

5.1 Road Classification

There are no new Class I, II or III Roads proposed within this Forest Harvest Plan. All proposed roads will be built to the Class IV requirements as per the Operating Ground Rules Table 3.

5.2 Road Planning and Design

Access to the compartment is through Basset 2, 3, 4 on existing Class II, III and IV roads under frozen conditions only.

All proposed inter-block roads within this Forest Harvest Plan will be submitted to Alberta as a spatial data set as per the Forest Harvest Plan/Annual Operating Plan/As-Built Spatial Digital Data Submission Directive and have been listed in the Road Summary in Appendix 9-2.

5.2.1 Protection of Roadside Vegetation

Roadside vegetation is a combination of non-merchantable trees, shrubs, forbs, and grasses located adjacent to a Class I, II and III Road. During operations this vegetation will be maintained by working around the vegetation and removing







the merchantable timber, where possible. When a Class I, II or III Road is utilized for the decking of harvested timber to utilize an existing disturbance and reduce the road disturbance for the harvested area, roadside vegetation will be difficult to protect.

5.2.2 Minimizing Line of Sight

During the development of the Forest Harvest Plan each harvest area adjacent to a Class I, II or III road was reviewed. If the line of sight exceeded 400m the harvest area was further reviewed to determine if the presence of roadside vegetation, watercourses or topography would reduce the line of sight. If the line of sight could not be impeded through natural features, tree retention patches where designed.

5.3 Road Construction

Road construction will comply with the Operating Ground Rules, specifically section 11.3.1 and 11.3.2, unless approval for a deviation has been obtained.

5.4 Road Maintenance (Erosion Control/Prevention)

Constructed roads will be maintained as necessary for timber hauling operations, and will comply with the Operating Ground Rules, specifically section 11.3.3, unless approval for a deviation has been obtained.

5.5 Road Reclamation

Road reclamation will comply with the Operating Ground Rules, specifically section 11.3.4, unless approval for a deviation has been obtained.

5.5.1 Seasonal Reclamation

Roads required for more than one season will be reclaimed as per the Operating Ground Rules, specifically 11.3.4.5, unless otherwise approved in the Annual Operating Plan.

5.5.2 Partial Reclamation

Roads required for more than one timber year will be reclaimed as per the Operating Ground Rules, specifically 11.3.4.6, unless otherwise approved in the Annual Operating Plan.

5.5.3 Total Reclamation

Roads and associated bared areas that are not required will be permanently reclaimed as per the Operating Ground Rules, specifically 11.3.4.7, unless otherwise approved in the Annual Operating Plan.

The Annual Operating Plan will identify and request roads that require All-terrain vehicle access for silviculture purposes, to maintain historical access for a Registered Fur Management holder, or for other users. Rollback will be completed on approaches to all watercourses.

5.6 Watercourse Crossings

The Forest Harvest Plan utilized a combination of field assessments and lidar to identity watercourses and to avoid watercourse crossings. Currently, the Wet Areas Mapping is not available within and therefore this information was not utilized in the Plan.





All in and near block watercourse classification has been assessed and determined during field verification as per Table 2 of the Operating Ground Rules. Any deviations have been noted in Appendix 9-1.

During operations if an unidentified watercourse is encountered, Alberta will be notified with a minor amendment or a major amendment approval will be obtained. The watercourse location, construction and reclamation activities will be completed as per the Operating Ground Rules, specifically section 11.4.

Some ephemeral and intermittent watercourse crossings within this Forest Harvest Plan will be constructed as lowprofile crossings where conditions permit. Low profile crossings are utilized where the watercourse crossing location has no relief or topography and bank protection is achieved by freezing conditions. Where there is topography (i.e. incised banks) snow or log fills will be utilized.

All proposed watercourse crossings within this Forest Harvest Plan will be submitted to Alberta as a spatial data set as per the Forest Harvest Plan/Annual Operating Plan/As-Built Spatial Digital Data Submission Directive.

5.6.1 Watercourse Monitoring Program

The watercourse monitoring program as described in the Companies' General Development Plan is observed for all constructed watercourse crossings.

5.7 Access Control

Operations will be during winter months only and primarily use winter access routes. Log haul operations are scheduled to coincide with timber harvest operations. In order to limit public access into the cut block road system, all new access will be blocked during extended periods of inactivity. Any required access control measures will be addressed in the Annual Operating Plan or Species of Special Management Concern Plan.

5.8 Camps and Facilities

There are no camp locations in Basset-5, camps will be located within the Basset 2&4 compartments. Specific locations will be included in those Plans. After the final determination of the exact camp location; the companies will notify Alberta. Any final camp location will be applied or under a Temporary Field Authority.

5.9 Agreements

A Land Status Automated System (LSAS) search has been completed on the areas contained within the Forest Harvest Plan and will be reviewed annually for potential changes. The appropriate agreements will be obtained from a disposition holder and practices required by a disposition holder will be implemented as per agreement.

5.9.1 Road Use Agreements

A current Road Use Agreement will be obtained prior to using a road under disposition.

5.9.2 Pipeline Crossing Agreements

A current Pipeline Crossing Agreement will be obtained prior to crossing any pipeline.

5.9.3 **Powerline Crossing Agreements**

A Powerline Crossing Agreement is required prior to crossing under a powerline. There are no known powerline crossings required to access the blocks included in this Forest Harvest Plan.





5.9.4 Highway Approaches

Highway approaches are required within this Forest Harvest Plan. Where a temporary road approaches an Alberta highway approval will be required from Alberta, specifically Alberta Transportation.

There are no new highway approaches required for this Forest Harvest Plan.

5.10 Special Access Zone

There is no Special Access Zones located within this Forest Harvest Plan.

5.11 **Processing Yard**

The proposed road plan accommodates a tree length haul directly to the Blue Angel Satellite yard. The proposed road plan also allows for hauling flexibility should the blocks be harvested over multiple years or by multiple contractors. The Companies will make reasonable efforts to minimize road disturbance and open up access where required.

6 SPATIAL HARVEST SEQUENCE

The Companies have committed to using the Stewardship Reporting Standard Directive for Alberta's Forest Management Plans (February 8, 2016) for reporting Spatial Harvest Sequence variance and the approval conditions set out in the 2016 F26 Forest Management Plan. The thresholds for acceptable Spatial Harvest Sequence variance is as follows:

- Additions shall be less than 20% of the area sequenced in the 1-10 Year Spatial Harvest Sequence by compartment by 16 yield strata used in the Detailed Forest Management Plan
- The area of substantial additions shall be less than or equal to the area deleted or deferred in the 1-10 Year Spatial Harvest Sequence by compartment by 16 yield strata used in the Detailed Forest Management Plan, and
- Total area harvested shall be less than the area in the 1-10 Year Spatial Harvest Sequence of the approved Forest Management Plan.

6.1 Variance Summary

A variance summary has been completed to track variance from the 2016 Spatial Harvest Sequence as well as total area harvested in order to:

- ensure a sustainable harvest level and future forest objectives are maintained through operations adhering to the Spatial Harvest Sequence,
- improve information for the next Spatial Harvest Sequence (e.g. landbase, yields), and
- make decisions around Forest Harvest Plan acceptance.

The Variance Overview Map shows the comparison of the Spatial Harvest Sequence to the laid out Forest Harvest Plan highlighting variance and additions. The Spatial Harvest Sequence Summary in Table 1 shows a tabular representation of the variance and additions for the compartment.

6.2 Unplanned

Unplanned Spatial Harvest sequence occurs within the compartment for stands yet to be designed and field verified or where either the conifer or deciduous operator does not have plans to harvest their spatial harvest sequence.







There is no unplanned sequence within this Forest Harvest Plan. All sequenced stands are either planned, deferred, or deleted.

6.3 Additions

The harvested area within this Forest Harvest Plan does not exceed 100% of the total area in the Spatial Harvest Sequence or strata description table by compartment per decade. The additions do not exceed 20% of the Spatial Harvest sequence.

Additions were made to operationalize a harvest area/road plan and have considered:

- protection of watershed and riparian values,
- maintenance of effective habitat for species of special concern,
- meet visual quality objectives,
- efficient forest management operations are feasible,
- endangerment threat, and
- Minimizing long term roading disturbance / number of entries into key wildlife areas and sensitive slope areas.

C-SW-AB-MG: 8 ha of additions have been sourced from the 11-20 SHS to allow for natural block boundaries and minimize the future footprint in the area. These are found within blocks 1180 and 3579.

D-CD-G: There is one 5ha addition within block 1504. This stand bisects the sequenced conifer. This addition facilitates operations and is of similar timber type to the surrounding sequenced conifer stand.

DC: There is a 2 ha addition to the DC strata in block 1658. This is a skinny finger that bisects the block. This addition facilitates operations and is of similar timber type to the surrounding sequenced conifer stand.





FOREST HARVEST PLAN

BASSET – 5

Table 2: Spatial Harvest Sequence Summary

				As-Built															Combined As-Built & Plan									
											Vari	ance			SF	IS Assessm	ent							Variand	e	SHS	Assessme	ent
Harvest Profile			vest Profile Harvested (ha)						Sliv Substantial (Planned +			Slivers ed + Harve	ested)	(Excluding Slivers)				Planned for Harvest (ha)				Substantial			(Excluding Slivers)			
Compartment	Provincial Yield Strata	Approved DFA 10 Year SHS	SHS 1-10yr	SHS 11-20yr	SHS 21-70yr	Active Landbase	Non-Contributing Landbase	Total	Additions	Deletions	Deferrals	Additions	Deletions & Deferrals	Total	SHS Variance (Additions %)	Difference in Area (Subst. Add D&D)	Difference in Area Total Harvested - 10yr FMP SHS	SHS 1-10yr	SHS 11-20yr	SHS 21-70yr	Active Landbase		Additions	Deletions	Deferrals	SHS Variance (Additions %)	Difference in Area (Subst. Add D&D)	Difference in Area Total Harvested & Planned - 10yr FMP SHS
	All	253	0	0	0	0	0	0	0	0	0	25	10	34	0%	-	(253)	142	8	7	0	1 159	17	15	85	7%	(84)	(94)
	CD-AB	28	0	0	0	0	0	0	0	0	0	2	1	2	0%	-	(28)	16	0	0	0	0 16	5 O	0	11	0%	(11)	(12)
	CD-CD	225	0	0	0	0	0	0	0	0	0	0	9	9	0%	-	(225)	126	0	0	0	0 126	6 O	15	74	0%	(89)	(98)
	C-P-AB	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	-	-	0	0	0	0	0 (0 0	0	0	0%	-	-
В	C-P-CD	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	-	-	0	0	0	0	0 (0	0	0	0%	-	-
А	C-SB	0	0	0	0	0	0	0	0	0	0	1	0	1	0%	-	-	0	0	0	0	0 (0 0	0	0	0%	-	-
S	C-SW-AB-F	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	-	-	0	0	0	0	0 (0 0	0	0	0%	-	-
S	C-SW-AB-MG	0	0	0	0	0	0	0	0	0	0	3	0	3	0%	-	-	0	8	0	0	0 8	8 8	0	0	100%	8	8
Е	C-SW-CD-F	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	-	-	0	0	0	0	0 0	0 0	0	0	0%	-	-
т	C-SW-CD-MG	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	-	-	0	0	0	0	0 0	0 0	0	0	0%	-	-
т	D(u)-AB	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	-	-	0	0	0	0	0 (0 0	0	0	0%	-	-
	D(u)-CD	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	-	-	0	0	0	0		0	0	0	0%	-	-
-	D-AB-G	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	-	-	0	0	0	0			0	0	0%	-	-
5	D-AB-MF	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	-	-	0	0	0	0			0	0	100%	-	-
		0	0	0	0	0	0	0	0	0	0	6	0	6	0%	-	-	0	0	2	0	0 4	2	0	0	100%	2	2
	D-CD-MF	0	0	0	0	0	0	0	0	0	0	2	0	0 2	0%			0	0	0	0	0 0		0	0	0%	0	0
	(blank)	0	0	0	0	0	0	0	0	0	0	5	0	5	0%	-	-	0	0	0	0	1 1	1	0	0	100%	1	1





12

BASSET - 5









6.4 Deletions and Deferrals

This Forest Harvest Plan does not delete more than 20% of the area sequenced in the Spatial Harvest Sequence by compartment per decade. The current significant deletions are calculated at 10%. The following table summarizes the deletions:

Deletion Reason	Area (ha)
Riparian Area	14
Sliver	10
TOTAL	25

This plan defers 34% of the sequenced stands to future sequences. These stands are currently merchantable or expected to become merchantable at some point in the future but have been deferred to harvest with future adjacent sequence. The following table summarizes the deferrals:

Deferral Reason		Area (ha)
Harvest with next Pass		85
	TOTAL	85

7 INTEGRATION WITH OTHER USERS

The Companies consider the needs of other forest users when planning and conducting operations. The Companies strive to notify known other users during the planning phase and prior to operations when required. Annually the Companies hold an Open House to provide an opportunity for the general public to gain information of the Companies plan development and harvest/haul activities. The following summarizes the method and timing of communication with other resource users within the Ponton-6 compartment.

7.1.1 Deciduous and Coniferous Integration

The coniferous cut periods 1 and 2 Spatial Harvest Sequence was used in the development of the Forest Harvest Plan. There is no deciduous cut period 1 Spatial Harvest Sequence in Bassett-5.

Incidental deciduous timber in Basset-5 is allocated to Daishowa-Marubeni International (DMI) who historically have not taken any incidental deciduous from this area. Where possible and if required, all efforts will be made to leave deciduous timber standing. Incidental utilization will be addressed within the Annual Operating Plan.

Forest operators with a timber disposition in the area covered by the Forest Harvest Plan will be provided a copy of the Forest Harvest Plan for review.

7.1.2 Forest Recreation and Tourism

Due to the proximity to the various communities around and including High Level it is assumed the area is utilized for hunting. All operations are planned for the months of November through to April of the following year, thus most proposed activities fall outside of the regulated hunting season.







7.1.3 Trapping

Holders of a Registered Fur Management Areas were contacted during the development of the Forest Harvest Plan. Communication has been summarized in Table 4. A copy of the Forest Harvest Plan has been mailed to each Registered Fur Management Area holder.

Table 3: Registered Fur Management Areas

RFMA	Senior Partner	Questions/Concerns/Comments
1063	Norman Chonkolam	Preliminary notification mailed out April 2018 Forest Harvest Plan mailed out July 2018
2505	Hazel Bellerose	Preliminary notification mailed out April 2018 Forest Harvest Plan mailed out July 2018
1701	Rick MacDougall	Preliminary notification mailed out April 2018 Forest Harvest Plan mailed out July 2018

7.1.4 Range Management

There are no grazing dispositions within the Basset-5 compartment. When a Grazing Timber Agreement is required the disposition holder will be contacted during the development of the Forest Harvest Plan.

7.1.5 Forest Aesthetics

The Companies will use tactics to reduce the impacts of timber harvest and reforestation on visual quality areas. There are no known areas considered highly sensitive within the Basset-5 compartment that:

- are within, adjacent to or viewed from recreational sites and tourist developments,
- seen from elevated viewpoints,
- adjacent to or viewed from major travel corridors (roads, lakes, and rivers), rural/urban forest interface and site-specific areas identified during the referral and public review process; or
- adjacent to primary and secondary highways in Alberta.

7.1.6 Historical Resources

The Companies have developed and implemented a process for identifying and protecting resources that are regulated by the Historical Resources Act that meets the requirements of Alberta Culture and Tourism.

Historical resource pre-screening has been completed for the Forest Harvest Plan and there are no known high potential historical sites requiring shovel testing. If a previously unknown historical resource is discovered during road building, harvesting or silviculture operations, operations will cease and the Alberta Culture and Tourism will be notified.

7.1.7 First Nations and Metis

Consultation is completed annually with First Nations and Metis through the General Development Plan.







8 SPECIES OF SPECIAL MANAGEMENT CONCERN

8.1 Woodland Caribou

There is one opening that overlaps with the Caribou Protection Area (CPA) within the Basset-5 Compartment. This block can be found in Appendix 9-1.

The companies are aware that the Provincial Woodland Caribou Range Plan is in draft form, and until a final range plan is completed, the Companies will follow all existing Forest Management Plan and Operating Ground Rules.

The companies specific strategies to mitigate and address Operating Ground Rules pertaining to Caribou Protection Areas will be submitted as part of the Annual Operating Plan's "Species of Special Management Concern" section.

8.2 Grizzly Bear

There is no Grizzly Bear Zone located within this Forest Harvest Plan as per the Alberta data set.

8.3 Trumpeter Swan

There are two Trumpeter Swan waterbodies located within this Forest Harvest Plan as per the Alberta data set. They are located along the Southwest edge of the Basset-5 compartment boundary. There are no openings that fall with in buffered portions of these lakes.

8.4 Key Wildlife and Biodiversity Zones

There is no Key Wildlife and Biodiversity Zones located within this Forest Harvest Plan as per the Alberta data set.

8.5 Arctic Grayling

Locations of existing arctic grayling was referenced from the Fisheries and Wildlife Management Information System using the Fish and Wildlife Internet Mapping Tool. There are no known Arctic Grayling watercourses and their associated tributaries in Basset 5.

8.6 **Other Species**

There were no sensitive sites (i.e. raptor nest, mineral lick) identified during field verification of this Forest Harvest Plan. Any sensitive sites identified post Forest Harvest Plan submission will be buffered as required by the Operating Ground Rules. The Fisheries and Wildlife Management Information System was also referenced to assess other species; no known species were identified.

8.7 Highly Sensitive Areas (Elements of Biodiversity Occurrences (EO))

The Alberta Conservation Information Management System has been reviewed. No known rare plants were identified in the Alberta Conservation Information Management System database. Identified sensitive sites found post Forest Harvest Plan submission (i.e. cultural and historic sites, sensitive wildlife sites such as dens, etc.) will be afforded the appropriate protection.







9 APPENDIXES







Appendix 9-1: Block Summary

See Attached PDF





Appendix 9-2: Road Summary

See Attached PDF







Appendix 9-3: Crossing Summary See attached PDF.







BASSET - 5

Appendix 9-4: Block Maps

See Attached PDFs









Appendix 9-5: Final Harvest Plan Overview Map

See Attached PDFs







Appendix 9-6: Final Harvest Plan Approval(s)

