

## Appendix A – Definition of Strata

Strata codes utilized to identify forest species composition on the landscape. This appendix is a consolidation of definitions from the provincial inventories of the forest sections across the FML. Due to discrepancies in stratum codes, similarly defined stratum have been consolidated into a “Consolidated Stratum” that has been used in the Current Forest Description (Section 4) and for the purposes of forest modelling for FML 2.

Consolidated Stratum	Forest Section/ Unit Inventory	Stratum Code	Stratum Description	Density Class	Crown Closure	Species Composition
CHDWD (Commercial hardwood)	Highrock, FMU 69, Nelson River (FRI/FLI)	MAP	Pure commercial hardwood	123	0-100%	Balsam poplar, trembling aspen, and/or white birch ≥ 75%
JP	Saskatchewan River	JP	Pure jack pine	1	0-50%	Jack pine ≥ 80%
				2	51-70%	
				3	71-100%	
	Highrock, FMU 69, Nelson River (FRI/FLI)	PJP	Pure jack pine	123	0-100%	Jack pine ≥ 75%
LBS	Highrock, FMU 69, Nelson River (FRI/FLI)	LBS	Lowland black spruce	123	0-100%	Black spruce ≥ 75% Moisture regime = W
	Saskatchewan River	LBS	Lowland black spruce	1	0-50%	Black spruce ≥ 80% Site = 1
				2	51-70%	
				3	71-100%	
MSPF	Saskatchewan River	MSPF	Mixedwood – Softwood leading	1	0-50%	Balsam fir, black spruce, jack pine, and/or white spruce 50-80%
				2	51-70%	
				3	71-100%	
	Highrock, FMU 69, Nelson River (FRI/FLI)	MWD	Mixedwood – Softwood leading	123	0-100%	Softwood 50-75% Hardwood 25-50%
NSPF	Saskatchewan River	NSPF	Mixedwood – Hardwood leading	1	0-50%	Black ash, trembling aspen, and/or white birch 50-80%
				2	51-70%	
				3	71-100%	
	Highrock, FMU 69, Nelson River (FRI/FLI)	NWD	Mixedwood – Hardwood leading	123	0-100%	Hardwood 50-75% Softwood 25-50%
OHDWD	Saskatchewan River	HDWD	Hardwood	1	0-50%	Hardwood ≥ 50%
				23	51-100%	
				123	0-100%	Hardwood ≥ 50%
OSFWD	Highrock, FMU 69, Nelson River (FRI/FLI)	OTHSW	Other softwood	123	0-100%	Softwood ≥ 50%
SFWD	Saskatchewan River	SFWD	Softwood	1	0-50%	Softwood ≥ 50% (No other explicit pure commercial softwood category specified in this section)
				2	51-70%	
				3	71-100%	
	Highrock, FMU 69, Nelson River (FRI/FLI)	SWD	Pure commercial softwood	123	0-100%	Balsam fir, black spruce, jack pine, and/or white spruce ≥ 75%

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Consolidated Stratum	Forest Section/ Unit Inventory	Stratum Code	Stratum Description	Density Class	Crown Closure	Species Composition
STL	Highrock, FMU 69, Nelson River (FRI/FLI)	STL	Black spruce and tamarack	123	0-100%	Black spruce and tamarack $\geq$ 75%
	Saskatchewan River	STL	Black spruce and tamarack – Black spruce leading	123	0-100%	Black spruce and tamarack 50-80%, with black spruce $\geq$ 80%
	Saskatchewan River	TLS	Black spruce and tamarack – Tamarack leading	12 3	0-70% 71-100%	Black spruce and tamarack 50-80%, with tamarack $\geq$ 80%
TA	Saskatchewan River	TA	Pure trembling aspen	1 2 3	0-50% 51-70% 71-100%	Trembling aspen $\geq$ 80%
	Highrock, FMU 69, Nelson River (FRI/FLI)	PTA	Pure trembling aspen	123	0-100%	Trembling aspen $\geq$ 75%
UBS	Highrock, FMU 69, Nelson River (FRI/FLI)	UBS	Upland black spruce	1 2 3	0-50% 51-70% 71-100%	Black spruce $\geq$ 75% Moisture regime = D, F, M, or V
	Saskatchewan River	UBS	Upland black spruce	1 2 3	0-50% 51-70% 71-100%	Black spruce $\geq$ 80% Site = 2 or 3

## Appendix B – Wetland Soil Organic Carbon Values

Soil organic carbon and carbon equivalence values for wetlands by forest section and cover class on FML 2, provided by Ducks Unlimited Canada and up to date as of August 2022 (DUC, 2022).

Forest Section	Cover Class	Hybrid Carbon Layer (EWC extent removed)		Enhanced Wetland Classification System		Combined Analysis		Combined Carbon Equivalence		
		Area (ha)	Soil Organic Carbon (tonnes)	Area (ha)	Soil Organic Carbon (tonnes)	Area (ha)	Soil Organic Carbon (tonnes)	CO <sub>2</sub> Equivalence (tonnes)	# of cars annual emissions equivalent	20-year cars annual emissions equivalent
Highrock	Bog	734,922	561,654,137	734,922	561,654,137	734,922	561,654,137	734,922	561,654,137	734,922
	Fen	242,901	388,119,731	242,901	388,119,731	242,901	388,119,731	242,901	388,119,731	242,901
	General Peatland	0	0	0	0	0	0	0	0	0
	Open Water	523,230	151,213,555	523,230	151,213,555	523,230	151,213,555	523,230	151,213,555	523,230
	Mineral Wetland	51,261	14,814,405	51,261	14,814,405	51,261	14,814,405	51,261	14,814,405	51,261
	Upland	1,148,905	181,354,601	1,148,905	181,354,601	1,148,905	181,354,601	1,148,905	181,354,601	1,148,905
	Rock/Unclassified	740,807	0	740,807	0	740,807	0	740,807	0	740,807
	Total	3,442,027	1,297,156,429	3,442,027	1,297,156,429	3,442,027	1,297,156,429	3,442,027	1,297,156,429	3,442,027
Nelson River	Bog	447,890	438,496,194	0	0	447,890	438,496,194	1,607,527,046	349,462,401	17,473,120
	Fen	307,743	545,374,464	0	0	307,743	545,374,464	1,999,342,784	434,639,736	21,731,987
	General Peatland	0	0	0	0	0	0	0	0	0
	Open Water	400,433	115,725,162	0	0	400,433	115,725,162	424,248,442	92,227,922	4,611,396
	Mineral Wetland	38,580	11,149,476	0	0	38,580	11,149,476	40,873,980	8,885,648	444,282
	Upland	1,193,705	188,426,352	0	0	1,193,705	188,426,352	690,771,005	150,167,610	7,508,380
	Rock/Unclassified	145,618	0	0	0	145,618	0	0	0	0
	Total	2,533,969	1,299,171,647	0	0	2,533,969	1,299,171,647	4,762,763,257	1,035,383,317	51,769,166
Saskatchewan River	Bog	134,313	244,725,636	26,533	34,589,408	160,846	279,315,044	1,023,968,952	222,601,946	11,130,097
	Fen	168,673	156,204,239	491,037	528,232,604	659,711	684,436,843	2,509,145,465	545,466,405	27,273,320
	General Peatland	888	1,162,909	0	0	888	1,162,910	4,263,229	926,789	46,339
	Open Water	76,744	22,178,903	611,110	176,610,818	687,854	198,789,721	728,763,117	158,426,765	7,921,338
	Mineral Wetland	67,561	19,525,013	334,638	155,569,833	402,198	175,094,845	641,897,703	139,542,979	6,977,149
	Upland	108,670	17,153,618	598,320	94,444,758	706,990	111,598,377	409,119,649	88,939,054	4,446,953
	Rock/Unclassified	91,885	0	89,704	0	181,589	0	0	0	0
	Total	648,734	460,950,318	2,151,341	989,447,422	2,800,075	1,450,397,740	5,317,158,116	1,155,903,938	57,795,197
All Sections	Bog	1,317,126	1,244,875,967	26,533	34,589,408	1,343,658	1,279,465,375	4,690,520,065	1,019,678,275	50,983,914
	Fen	719,318	1,089,698,434	491,328	528,553,758	1,210,645	1,618,252,192	5,932,512,534	1,289,676,638	64,483,832
	General Peatland	888	1,162,909	0	0	888	1,162,911	4,263,233	926,790	46,339
	Open Water	1,000,407	289,117,619	611,414	176,698,631	1,611,821	465,816,250	1,707,682,374	371,235,299	18,561,765
	Mineral Wetland	157,401	45,488,894	334,704	155,597,393	492,105	201,086,287	737,182,329	160,257,028	8,012,851
	Upland	2,451,280	386,934,570	599,044	94,559,145	3,050,324	481,493,715	1,765,155,960	383,729,557	19,186,478
	Rock/Unclassified	978,310	0	89,971	0	1,068,282	0	0	0	0
	Total	6,624,730	3,057,278,394	2,152,994	989,998,337	8,777,724	4,047,276,731	14,837,316,496	3,225,503,586	161,275,179

## Appendix C – Softwood Annual Allowable Cut Statuses for 1999 to 2025 Control Periods

2027-2046 FML 2 Forest Management Plan – Appendix C – Softwood Annual Allowable Cut Statuses for 1999 to 2025 Control Periods

C.1. A summary of harvest activity by volume within FML 2 by forest section during the 1999 to 2005 period.

Forest Section	FMU	6-Year Averaging Period	AAC (m <sup>3</sup> ) Level 1	AAC (m <sup>3</sup> ) Flexible Utilization	6-Year Period Flexible AAC (m <sup>3</sup> )	1999/00 Opening Balance (m <sup>3</sup> )	1999/00 Harvest (m <sup>3</sup> )	2000/01 Harvest (m <sup>3</sup> )	2001/02 Harvest (m <sup>3</sup> )	2002/03 Harvest (m <sup>3</sup> )	2003/04 Harvest (m <sup>3</sup> )	2004/05 Harvest (m <sup>3</sup> )	1999-2000 Total (m <sup>3</sup> ) <sup>(3,4)</sup>	Remaining 6-Year Period AAC (m <sup>3</sup> )
Mountain	12	1999-2004	82,700		380,241	0	33,935	13,840	51,250	57,333	11,955	26,819	195,132	185,109
Subtotal			82,700			0	33,935	13,840	51,250	57,333	11,955	26,819	195,132	185,109
Interlake	47 <sup>(1)</sup>	1999-2004	34,090		218,858	0	8,361	3,458	0	0	0	0	11,819	207,039
Subtotal			34,090			0	8,361	3,458	0	0	0	0	11,819	207,039
Sask. River	51	1999-2004	83,780		537,868	0	73,927	79,213	49,063	38,785	65,056	80,456	386,498	151,369
	52	1999-2004	17,960		115,303	0	1,289	432	24,405	21,498	42,113	726	90,463	24,840
	53	1999-2004	134,600		864,132	0	93,734	61,693	39,293	79,195	134,645	205,670	614,231	249,901
	54	1999-2004	7,060		45,325	0	0	640	0	0	0	0	640	44,685
	55	1999-2004	26,300		168,846	0	21,417	0	24,895	28,557	37,185	29,928	141,983	26,863
	56	1999-2004	67,250		431,735	0	50,458	68,644	72,282	114,978	43,897	79,614	429,873	1,872
Subtotal			336,950			0	240,825	210,621	209,938	283,013	325,112	413,020	1,663,688	499,530
Highrock <sup>(2)</sup>	60	1999-2004	21,110		135,526	16,297	0	5,936	20,464	21,402	25,080	41,451	130,630	4,897
	61	1999-2004	38,830		242,494	0	14,494	0	9,904	0	9,904	0	34,302	208,192
	62	1999-2004	98,490		615,070	0	77,013	52,098	40,425	99,221	73,088	111,572	453,418	161,652
	63	1999-2004	<del>124,000</del>	80,600	621,290	0	111,399	92,737	105,729	80,827	51,333	60,126	502,151	119,139
	64	1999-2004	179,160		1,118,164	0	18,832	23,148	12,280	4,266	0	0	58,526	1,059,638
	65	1999-2004	100,180		625,625	0	0	0	0	0	0	9,562	9,563	616,062
	66	1999-2004	84,220		525,954	0	5,354	0	0	8,619	28,875	0	42,849	483,106
Subtotal			645,990			16,297	227,092	173,919	188,802	214,336	190,464	231,641	1,231,439	2,652,686
Nelson River <sup>(2)</sup>	83	1999-2004	<del>190,050</del>	123,533	959,372	0	108,920	121,060	87,402	122,322	104,889	120,235	664,828	294,545
	84	1999-2004	<del>174,600</del>	113,490	881,381	0	152,066	136,110	106,008	111,139	121,354	165,103	791,780	89,600
	85	1999-2004	<del>121,130</del>	78,735	611,464	0	62,015	120,416	95,259	64,097	85,841	66,801	494,430	117,034
	87	1999-2004	<del>115,380</del>	74,997	582,439	0	3,957	10,826	4,533	44,774	26,924	73,455	164,469	417,970
	89	1999-2004	<del>33,050</del>	21,483	166,876	0	0	0	0	0	0	0	0	166,876
	Inco	1999-2004	<del>41,100</del>	26,715	207,473	0	11,935	1,027	3,185	8,217	12,180	37,482	74,025	133,448
Subtotal			675,310	438,952		0	338,893	389,439	296,387	350,549	351,188	463,282	2,189,532	1,219,473
Total FML 2			1,775,040	1,433,012		16,297	849,106	791,278	746,377	905,231	878,718	1,137,021		

<sup>(1)</sup> Interlake area FMU 47 and Mountain area FMU 12 remain as a portion of the FMUs inside the FML.

<sup>(2)</sup> FMU AACs are either Level 1 or Flexible Utilization. Struck out values indicate the value not utilized.

<sup>(3)</sup> Volume is recorded by year delivered, not by cut date. Some FMU harvest levels include bush estimates that will be updated in future reports with mill scales.

<sup>(4)</sup> Volume reported against AAC excludes deliveries of unmerchantable volumes to reflect exceeding provincial utilization standard.

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C.2. A summary of harvest activity by volume within FML 2 by forest section during the 2005 to 2010 period.

Forest Section	FMU	5-Year Averaging Period	AAC (m <sup>3</sup> ) Level 1	AAC (m <sup>3</sup> ) Flexible Utilization <sup>(2)</sup>	5-Year Period AAC (m <sup>3</sup> )	2005/06 Harvest (m <sup>3</sup> )	2006/07 Harvest (m <sup>3</sup> )	2007/08 Harvest (m <sup>3</sup> )	2008/09 Harvest (m <sup>3</sup> )	2003/04 Harvest (m <sup>3</sup> )	2005-2010 Total (m <sup>3</sup> ) <sup>(3,4)</sup>	Remaining 5-Year Period AAC (m <sup>3</sup> )
Mountain	12 <sup>(1)</sup>	2005-2010	10,710		53,550	3,545	12,483	685	32,592	14,620	62,013	-8,463
Subtotal			10,710		53,550	3,545	12,483	685	32,592	14,620	62,013	-8,463
Interlake	47 <sup>(1)</sup>	2005-2010	12,041		60,205	0	0	0	0	0	0	60,205
Subtotal			12,041		60,205	0	0	0	0	0	0	60,205
Sask. River	51	2005-2010	<del>68,448</del>	65,026	325,130	0	6,688	51,766	9,021	26,527	92,586	232,544
	52	2005-2010	17,960		89,800	0	36,355	21,621	5,114	2,018	61,440	28,360
	53	2005-2010	134,600		673,000	137,049	88,530	75,334	86,413	101,921	482,157	190,843
	54	2005-2010	7,060		35,300	0	0	0	10,243	0	9,739	25,561
	55	2005-2010	26,300		131,500	0	0	29,456	20,936	44,470	92,535	38,965
	56	2005-2010	67,250		336,250	95,425	100,319	36,863	6,678	73,033	307,152	29,098
Subtotal			321,618		1,590,980	232,474	231,892	215,041	138,405	247,968	1,045,609	545,371
Highrock	60	2005-2010	21,110	<del>43,724</del>	105,550	21,691	15,661	27,972	22,567	6,598	92,751	12,799
	67	2005-2010	313,909	<del>204,044</del>	1,569,545	157,742	192,645	244,477	153,963	63,925	791,860	777,685
	68	2005-2010	<del>142,644</del>	92,717	463,585	4,929	0	64,789	0	0	69,380	394,205
	69	2005-2010	<del>168,132</del>	109,286	546,430	0	0	0	0	0	0	546,430
Subtotal			645,792	419,765	2,685,110	184,362	208,306	337,238	176,530	70,523	953,991	1,731,119
Nelson River	83	2005-2010	<del>190,050</del>	123,532	617,660	49,019	65,390	109,511	0	0	221,869	395,791
	84	2005-2010	<del>174,600</del>	113,490	567,450	131,803	52,022	35,070	0	0	218,466	348,984
	85	2005-2010	<del>121,130</del>	78,735	393,675	66,649	6,134	42,700	0	0	115,154	278,521
	87	2005-2010	<del>115,380</del>	74,997	374,985	11,981	65,679	6,859	0	0	84,334	290,651
	89	2005-2010	<del>33,050</del>	21,482	107,410	0	0	0	0	0	0	107,410
	Inco	2005-2010	<del>41,100</del>	26,715	133,575	18,333	47,909	0	0	0	66,157	67,418
Subtotal			675,310	438,951	2,194,755	277,785	237,133	194,141	0	0	705,980	1,488,775
Total FML 2			1,665,471	923,742	1,316,920	698,165	689,815	747,104	347,527	333,111	2,767,593	3,817,007

<sup>(1)</sup> Interlake area FMU 47 and Mountain area FMU 12 remain as a portion of the FMUs is inside the FML.

<sup>(2)</sup> FMU AACs are either Level 1 or Flexible Utilization. Struck out values indicate the value not utilized.

<sup>(3)</sup> Volume is recorded by year delivered, not by cut date. Some FMU harvest levels include bush estimates that will be updated in future reports with mill scales.

<sup>(4)</sup> Volume reported against AAC excludes deliveries of unmerchantable volumes to reflect exceeding provincial utilization standard.

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C.3. A summary of harvest activity by volume within FML 2 by forest section during the 2010 to 2015 period.

Forest Section	FMU	5-Year Averaging Period	AAC (m <sup>3</sup> ) Level 1	AAC (m <sup>3</sup> ) Flexible Utilization <sup>(2)</sup>	5-Year Period AAC (m <sup>3</sup> )	Undercut Carried Forward	2010/11 Opening Balance (m <sup>3</sup> )	2010/11 Harvest (m <sup>3</sup> )	2011/12 Harvest (m <sup>3</sup> )	2012/13 Harvest (m <sup>3</sup> )	2013/14 Harvest (m <sup>3</sup> )	2014/15 Harvest (m <sup>3</sup> )	2005-2010 Total (m <sup>3</sup> ) <sup>(3, 4)</sup>	Remaining 5-Year Period AAC (m <sup>3</sup> )
Mountain	12 <sup>(1)</sup>	2010-2015	10,710		53,550		10,710	4,844	13,057	0	0	0	17,901	35,649
Subtotal			10,710		53,550	0	10,710	4,844	13,057	0	0	0	17,901	35,649
Interlake	47 <sup>(1)</sup>	2010-2015	12,041		60,205		12,041	0	0	22,662	2,835	0	25,497	34,708
Subtotal			12,041		60,205	0	12,041	0	0	22,662	2,835	0	25,497	34,708
													0	
	51	2010-2015	68,448	<del>65,026</del>	342,240		68,448	41,198	18,808	3,201	10,701	11,667	85,576	256,664
	52	2010-2015	17,960		89,800	17,960	35,920	0	10,160	33,424	20,486	654	64,724	43,036
Sask. River	53	2010-2015	134,600		673,000		134,600	71,535	99,020	51,966	58,716	76,798	358,034	314,966
	54	2010-2015	7,060		35,300		7,060	0	0	4,410	2,678	4,438	11,526	23,774
	55	2010-2015	26,300		131,500	26,300	52,600	1,376	10,440	33,889	35,146	20,935	101,785	56,015
	56	2010-2015	67,250		336,250	27,913	95,163	74,188	66,139	100,829	36,720	54,871	332,747	31,416
Subtotal			321,618	65,026	1,608,090	72,173	393,791	188,297	204,568	227,719	164,446	169,362	954,392	725,871
	67 <sup>(5)</sup>	2010-2015	313,909	<del>204,041</del>	1,569,545			96,465	99,052	118,151	147,688	147,178	608,533	961,012
Highrock	68 <sup>(5)</sup>	2010-2015	<del>142,641</del>	92,717	463,585			0	0	0	0	0	0	463,585
	69 <sup>(5)</sup>	2010-2015	<del>168,132</del>	109,286	546,430			0	0	0	0	0	0	546,430
Subtotal			624,682	406,044	2,579,560	0	0	96,465	99,052	118,151	147,688	147,178	608,533	1,971,027
	83	2010-2015	<del>190,050</del>	123,532	617,660		123,532	0	0	0	0	18,317	18,317	599,343
	84	2010-2015	<del>174,600</del>	113,490	567,450		113,490	0	0	0	0	0	0	567,450
Nelson River	85	2010-2015	<del>121,130</del>	78,735	393,675		78,735	0	0	0	11,738	33,891	45,629	348,046
	87	2010-2015	<del>115,380</del>	74,997	374,985		74,997	0	0	0	0	818	818	374,167
	89	2010-2015	<del>33,050</del>	21,482	107,410		21,482	0	0	0	0	0	0	107,410
	Inco	2010-2015	<del>41,100</del>	26,715	133,575		26,715	1,476	896	0	6,511	0	8,883	124,692
Subtotal			675,310	438,951	2,194,755	0	438,951	1,476	896	0	18,249	53,025	73,646	2,121,109
Total FML 2			1,644,361	910,021	6,496,160	72,173	855,493	291,082	317,573	368,532	333,218	369,564	1,679,969	4,888,364

<sup>(1)</sup> Interlake area FMU 47 and Mountain area FMU 12 remain as a portion of the FMUs is inside the FML.

<sup>(2)</sup> FMU AACs are either Level 1 or Flexible Utilization. Struck out values indicate the value not utilized.

<sup>(3)</sup> Volume is recorded by year delivered, not by cut date. Some FMU harvest levels include bush estimates that will be updated in future reports with mill scales.

<sup>(4)</sup> Volume reported against AAC excludes deliveries of unmerchantable volumes to reflect exceeding provincial utilization standard.

<sup>(5)</sup> FMUs in Highrock Forest Section were amalgamated in 2007.

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C.4. A summary of harvest activity by volume within FML 2 by forest section during the 2015 to 2020 period.

Forest Section	FMU	5-Year Averaging Period	AAC (m <sup>3</sup> ) Level 1 <sup>(1)</sup>	5-Year Period AAC (m <sup>3</sup> )	2015/20 Opening Balance (m <sup>3</sup> )	2015/16 Harvest (m <sup>3</sup> )	2016/17 Harvest (m <sup>3</sup> )	2017/18 Harvest (m <sup>3</sup> )	2018/19 Harvest (m <sup>3</sup> )	2019/20 Harvest (m <sup>3</sup> )	2015-2020 Total (m <sup>3</sup> ) <sup>(3,4)</sup>	Remaining 5-Year Period AAC (m <sup>3</sup> )
Sask. River Mountain Interlake <sup>(2)</sup>	50	2015-2020	26,809	134,045	26,809	0	0	0	0	0	0	134,045
	53	2015-2020	103,990	519,950	103,990	17,225	17,054	0	1,354	0	35,633	484,317
	58	2015-2020	131,910	659,550	131,910	13,304	19,156	0	0	35,875	68,335	591,215
	59	2015-2020	93,488	467,440	93,488	55,612	83,292	98,115	48,256	2,417	287,692	179,748
Subtotal			356,197	1,780,985	356,197	86,141	119,502	98,115	49,610	38,292	391,660	1,389,325
Highrock	67	2015-2020	379,371	1,896,855	379,371	85,195	59,314	0	0	0	144,509	1,752,346
	68	2015-2020	62,206	311,030	62,206	0	0	0	0	0	0	311,030
	69	2015-2020	168,132	840,660	168,132	0	0	0	0	0	0	840,660
	Subtotal			609,709	3,048,545	609,709	85,195	59,314	0	0	0	144,509
Nelson River	83	2015-2020	195,550	977,750	195,550	47,977	34,305	0	0	0	82,283	895,467
	84	2015-2020	180,330	901,650	180,330	3,018	1,492	0	0	0	4,510	897,140
	85	2015-2020	129,610	648,050	129,610	4,674	517	0	0	0	5,191	642,859
	87	2015-2020	130,900	654,500	130,900	2,232	1,452	0	0	0	3,684	650,816
	89	2015-2020	38,920	194,600	38,920	0	0	0	0	0	0	194,600
Subtotal			675,310	3,376,550	675,310	57,901	37,767	0	0	0	95,668	3,280,882
Total FML 2			1,641,216	8,206,080	1,641,216	229,237	216,583	98,115	49,610	38,292	631,837	7,574,243

<sup>(1)</sup> FMU AACs are a combination of new Provincial standard (FMUs 50, 53, 58, 59, 67 and 68) and previous Provincial standard (FMUs 69, 83, 84, 85, 87, and 89).

<sup>(2)</sup> FMUs in Saskatchewan River/Mountain/Interlake Forest Section were amalgamated effective the 2015-16 Operating Year.

<sup>(3)</sup> Volume reported against AAC excludes deliveries of unmerchantable volumes to reflect exceeding provincial utilization standard.

<sup>(4)</sup> Unmerchantable volume (Forestry Branch Circular C-8) is not applied to quotas, timber sales or deducted from the AAC. Volume is recorded by year delivered, not by cut date.

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C.5. A summary of harvest activity by volume within FML 2 by forest section during the 2020 to 2025 period.

Forest Section	FMU	5-Year Averaging Period	AAC (m <sup>3</sup> ) Level 1 <sup>(1)</sup>	5-Year Period AAC (m <sup>3</sup> )	2010/11 Harvest (m <sup>3</sup> )	2011/12 Harvest (m <sup>3</sup> )	2012/13 Harvest (m <sup>3</sup> )	2013/14 Harvest (m <sup>3</sup> )	2014/15 Harvest (m <sup>3</sup> )	2005-2010 Total (m <sup>3</sup> ) <sup>(3, 4)</sup>	Remaining 5-Year Period AAC (m <sup>3</sup> )
Sask. River Mountain Interlake <sup>(2)</sup>	50	2020-2025	26,809	134,045	0	0				0	134,045
	53	2020-2025	103,990	519,950	15,292	60,027				75,319	444,631
	58	2020-2025	131,910	659,550	35,509	30,814				66,323	593,227
	59	2020-2025	93,488	467,440	132	68,772				68,904	398,536
Subtotal			356,197	1,780,985	50,933	159,613				210,545	1,570,440
Highrock	67	2020-2025	379,371	1,896,855	0	19,530				19,530	1,877,325
	68	2020-2025	62,206	311,030	0	0				0	311,030
	69	2020-2025	168,132	840,660	0	0				0	840,660
	Subtotal			609,709	3,048,545	0	19,530				19,530
Nelson River	83	2020-2025	195,550	977,750	0	0				0	977,750
	84	2020-2025	180,330	901,650	0	0				0	901,650
	85	2020-2025	129,610	648,050	0	0				0	648,050
	87	2020-2025	130,900	654,500	0	0				0	654,500
	89	2020-2025	38,920	194,600	0	0				0	194,600
Subtotal		2020-2025	26,809	134,045	0	0				0	134,045
Total FML 2			1,641,216	8,206,080	50,933	179,143	0	0	0	230,075	7,976,005

<sup>(1)</sup> FMU AACs are a combination of new Provincial standard (FMUs 50, 53, 58, 59, 67 and 68) and previous Provincial standard (FMUs 69, 83, 84, 85, 87, and 89).

<sup>(2)</sup> FMUs in Saskatchewan River/Mountain/Interlake Forest Section were amalgamated effective the 2015-16 Operating Year.

<sup>(3)</sup> Volume reported against AAC excludes deliveries of unmerchantable volumes to reflect exceeding provincial utilization standard.

<sup>(4)</sup> Unmerchantable volume (Forestry Branch Circular C-8) is not applied to quotas, timber sales or deducted from the AAC. Volume is recorded by year delivered, not by cut date.

## Appendix D – Road Ledger

Roads constructed, managed, and decommissioned by Canadian Kraft Paper Industries Ltd by forest management unit (FMU) within each forest section across FML 2 as of 2021. Road categories are listed below the table. See sections 3.2.1 of Historic Forest Description and 16.2 Road Development, Access Management, and Other Infrastructure for additional details.

Forest Section	FMU	Road Name	Category*	Total Length (km)	Status (2021)	Constructed		Decommissioned		
						Year	Length (km)	Year	Length (km)	Reclaimed (km)
Saskatchewan River	53	Baril Lake Road-Branch	2		Not active / Available	1980	0.17			
		Crossing Bay Road	1		Active / Available	1970	93.02			
		East Talbot Road	2		Proposed decommission in 1-2 yrs	1980	8.66			
		Hargrave Road	2		Temporarily decommissioned	1980	5.72			
		Okaw East Road	2		Active / Available	2021	10.55	2013	10.45	10.40
		Okaw Road	2		Active / Available, decommissioned	2003	24.88			
		Spruce Road	2		Proposed decommission in 1-2 yrs	1980	4.36			
		Talbot Road	2		Proposed decommission in 1-2 yrs	1980	11.05			
	Baril Lake Road	2	9.75		Not active / Available	1980	9.75		-	
	Davidson Road	2	28.61		Decommissioned	1990	28.61	2017	28.61	16.00
	East Arm	2	11.92		Active / Available, planned	2013	4.76		-	
	Ochre Lake Road	2	30.67		Active / Available, decommissioned, proposed decommission 2-5 yrs	1997, 1998	30.67		4.00	
	Sugar Road	2	7.49		Decommissioned	2004	7.49	2015	7.49	8.00
	William Lake Road	2	14.00		Active / Available	1980	14.00		-	
	William River Road	2	10.90		Temporarily Decommissioned, planned	2021	8.80		-	
	Bignell Road	2	21.19		Active / Available, planned		6.88		-	
	Egg Lake Road	2	39.68		Decommissioned	1970	39.68	2004	39.68	29.10
	Goose Lake Rd	2	1.48		Decommissioned		1.48		1.48	
	Goose River Road	2	14.17		Decommissioned	1970	14.17	2007	14.17	8.00
	Halfway Road	2	21.51		Active / Available, proposed decommission in 1-2 yrs	1970	16.45		-	
	Little Atik Road	2	3.52		Decommissioned, proposed decommission 2-5 yrs	1980	3.52		2.32	
	Mill Road	1	4.08		Active / Available		4.08		-	
	Mill Road South	1	2.38		Active / Available		2.38		-	
Mill Road South-Secondary	2	1.39		Active / Available		1.39		-		
Mitchell Lake Road	2	41.40		Not active / Available, Decommissioned	1970	41.40		11.64		
Quarry Road	2	2.37		Active / Available		2.37		-		
Root Lake Road	2	5.84		Not active / Available	1980	5.84		-		

\*See road category definitions following this table.

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Forest Section	FMU	Road Name	Category*	Total Length (km)	Status (2021)	Constructed		Decommissioned		
						Year	Length (km)	Year	Length (km)	Reclaimed (km)
Highrock	67	Alberts Lake Road	2	6.40	Decommissioned	1970	6.40	2012	6.40	8.00
		Cliff Lake Road	2	16.05	Decommissioned	1990	16.05	2004	16.05	16.30
		Corky's Point Road	2	2.33	Decommissioned	2006	2.33	2009	2.33	-
		Corky's Point Road North	2	4.62	Decommissioned	2006	4.62	2009	4.62	4.00
		Duval Road-Primary	1	6.03	Not active / Available	1970	6.03		-	
		Duval Road-Secondary	2	31.23	Decommissioned	1970	31.23	2006	31.23	32.40
		Herb Bay Road-CKP	2	3.51	Decommissioned	1980	3.51	2003	3.51	15.00
		Herblet Road	2	5.78	Decommissioned	1980	5.78	2003	5.78	5.00
		Hobbit Road	2	24.46	Active / Available	1970	24.46		-	
		Imperial Lake Road	2	2.66	Decommissioned	1980	2.66	2006	2.66	8.00
	68	Imperial Road	2	5.98	Decommissioned		5.98		5.98	
		Imperial Road Sub1	2	0.27	Decommissioned		0.27		0.27	
		Kississing North Road	2	26.84	Active / Available, MI transfer	1970	26.84		-	
		Naosap Road	2	20.20	Decommissioned	1970, 1997	20.20	2015	20.20	20.10
		Thunderhill Road	2	13.34	Decommissioned	1970	13.34	2010	13.34	25.00
		Wabishkok Road	2	8.63	Decommissioned	1980	8.63	2007	8.63	8.70
		Westarm Road	2	15.27	Decommissioned	2005, 2005, 2006	15.27	2009	15.27	18.00
		Westarm Road West	2	2.84	Decommissioned		2.84		2.84	
		Batty Road	2	14.74	Proposed decommission in 1-2 yrs	1970, 2004, 2005, 2016	12.50			
		Batty Road Branch1	2	0.25	Proposed decommission in 1-2 yrs		0.25			
68	Charles Road	2	6.62	Abandoned	2001	6.62				
	Limestone Road	1	52.52	Not active / Available, proposed decommission in 1-2 yrs	1980	52.52				
	Ruddock Road	2	12.97	Not active / Available	2003	7.50				
	Three Finger Road	2	14.24	Not active / Available	1990	14.24				
	Three Finger Road Sub1	2	1.31	Not active / Available	1990	1.31				
	Transit Road	2	14.18	Not active / Available	1980	14.18				

\*See road category definitions following this table.

2027-2046 FML 2 Forest Management Plan – Appendix D – Road Ledger

Forest Section	FMU	Road Name	Category*	Total Length (km)	Status (2021)	Constructed		Decommissioned		
						Year	Length (km)	Year	Length (km)	Reclaimed (km)
Highrock Off-licence	60	Anvil Road-CKP	2	8.44	Decommissioned	1970	8.44	2004		
		Bacon Lake	2	7.33	Decommissioned	1970	7.33	2004		
		Chisel Rail Bed	2	82.00	Active / Available, Temporarily Decommissioned	2005	82.00			
		Danielson Road	2	2.43	Decommissioned	1980	2.43	2004		
		Danielson Road sub1	2	0.55	Decommissioned		0.55			
		Dickstone Road South	2	17.20	Active / Available, Temporarily Decommissioned, Planned	2013, 2014, 2014	13.20			
		Leak Lake	2	2.90	Decommissioned	1970	2.90	2004		
		Leak Lake Tower Road East	2	3.46	Decommissioned	1970	3.46	2004		
		Leak Lake Tower Road West	2	6.69	Decommissioned	1970	6.69	2004		
		Simonhouse Road	2	20.24	Decommissioned	1970	20.24	2004		
Wedge Lake Road	2	10.13	Decommissioned	1999	10.13	2012				
Nelson River	83	Duck Lake Road	2	5.59	Decommissioned	1980	5.59		5.59	
		Landing Lake Road	2	5.05	Decommissioned	1980	5.05		5.05	
		Milk Lake Road	2	41.74	Decommissioned	1970	41.74	2007	41.74	30.00
		Milk Lake Road Sub 1	2	8.36	Decommissioned	1970	8.36	2007	8.36	
		Milk Lake Road Sub 2	2	2.69	Decommissioned	1970	2.69	2007	2.69	
		Milk Lake Shortcut	2	3.80	Decommissioned	1970	3.80	2007	3.80	3.80
		Scatch Lake Road	2	15.04	Decommissioned	1980	15.04	2007	15.04	15.00
		Setting Lake Road	2	7.75	Proposed decommission 2-5 yrs Decommissioned, proposed decommission 2-5 yrs, temporarily decommissioned	1990	7.75		-	
		Thicket Creek Road	2	34.63	Proposed decommission 2-5 yrs, temporarily decommissioned	1970	34.63		19.66	
		Bruneau Road	2	6.82	Proposed decommission in 1-2 yrs	2004	6.82		-	
Nelson River	84	Jonas Road South	1	47.68	Proposed decommission 2-5 yrs, Temporarily decommissioned	1980	47.68		-	
		Lucky Bay Road	2	8.41	Decommissioned	1980	7.70		7.70	
		McLaren Creek Road	1	14.53	Proposed decommission 2-5 yrs	1980, 1997, 1998	14.53		-	
		McLaren Creek Road Sub1	1	0.75	Proposed decommission in 1-2 yrs	1980	0.75		-	
		Paint Creek Road	2	5.92	Decommissioned	1980	5.92	2004	5.79	5.80
		Radar Lake Road	2	24.74	Proposed decommission 2-5 yrs	2001, 2003	21.73		-	
		South Joey Road	2	21.67	Decommissioned, decommissioned	1980, 1980	21.67	2007	21.67	22.00
		Wintering Peninsula Road	2	23.47	Proposed decommission in 1-2 yrs	1997, 1998	23.47		-	
Wintering Peninsula Road branch	2	0.02	Proposed decommission in 1-2 yrs				-			

\*See road category definitions following this table.

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Forest Section	FMU	Road Name	Category*	Total Length (km)	Status (2021)	Constructed		Decommissioned		
						Year	Length (km)	Year	Length (km)	Reclaimed (km)
		Grass River Road	2	2.57	Decommissioned	1980	2.57	2003	2.57	3.00
		Jonas Road North	1	4.94	Proposed decommission in 1-2 yrs	1980	4.94		-	
		North Joey Road	2	5.88	Decommissioned	1980	5.88	2016	5.88	7.00
	85	Partridge Crop Road-CKP	1	7.56	Decommissioned	1990	7.56	2007	7.56	14.00
		Sawlog Road	2	3.72	Decommissioned	1990	3.72	2006	3.72	7.00
		Thompson Creek Road	2	8.24	Decommissioned	1980	6.83	2003	8.24	6.70
		Velde Road	2	6.66	Decommissioned	1980	6.66	2003	6.66	6.50
	87	Buckingham Lake Road-CKP	2	42.81	Temporarily decommissioned	1999, 2001, 2005	32.00			
		Jonas Road North-Prov	1	39.26	MI transfer	1980	39.26			
Total Length (km)				1,305.9			1,249.3		430.6	352.8

\*See road category definitions following this table.

*Category 1: All-Weather Road – Primary*

- ✦ All-weather road constructed to access major long-term wood supply areas on a Forest Management Unit (FMU) scale.
- ✦ Includes built up road subgrade and gravel running surface.
- ✦ Approximate life expectancy of twenty years or more.

*Category 2: All-Weather Road – Secondary*

- ✦ All-weather road constructed to access individual operating areas.
- ✦ Includes built up road subgrade and gravel running surface.
- ✦ Approximate life expectancy of three years to twenty years.

*Category 3: Seasonal Road - Summer Access*

- ✦ Seasonal road or trail that provides access within and between harvest blocks from primary and secondary roads. May also provide access to smaller operations or isolated harvest blocks. Accessibility may be limited during wet seasons (spring and fall) or periods but can normally be accessed during summer and winter.
- ✦ Consist of stumped (i.e., where trees and stumps have been cleared) trails with little to no gravel or subgrade.
- ✦ Established on mostly high (upland, dry) ground, some subgrade construction may occur in low areas, allows for vehicle access more or less year-round.
- ✦ Life expectancy is usually one to two years but may be longer in certain circumstances.

*Category 4: Seasonal Road – Winter (Frost) Access*

- ✦ Winter road or trail that provides access within and between harvest blocks areas from primary, secondary and winter ice roads. May also provide access to smaller operations or isolated harvest blocks.
- ✦ Consist of stumped trails with no gravel or grade.
- ✦ Category 4 seasonal roads are roads that at some point on the route utilize swamps and/or wet ground to such an extent that vehicle access requires winter (frost) conditions for travel.
- ✦ Life expectancy is usually one to two years but may be longer in certain circumstances.

*Category 5: Seasonal Road – Winter (Ice) Access*

- ✦ Winter-only ice roads built to access and deliver wood from operating areas.
- ✦ Establishment will require some combination of tramping swamps and low drainage areas to drive frost in and ice crossings of lakes, rivers, streams. Crossing over periodic areas of higher ground may require some stumping.
- ✦ Category 5 winter roads are distinguished from Category 4 seasonal winter (frost) roads by including major crossings of large swamps and/or lakes and accessing larger areas with higher volumes of timber (operating area scale).
- ✦ A given route may be utilized for a single winter season or over several years.

## Appendix E – Major Watercourse Crossings

Water crossings constructed, managed, and decommissioned by Canadian Kraft Paper Industries Ltd by forest management unit (FMU) within each forest section across FML 2 as of 2021. See sections 1.3.2.2 Historic Forest Description and 16.2.4 Watercourse Crossings for additional details.

Forest Section	FMU	Road Name	Location (km)	Crossing Type	Crossing ID	Crossing Name	Crossing Status	Construction Year	Road Status at Crossing Location
Highrock	60	Chisel Rail Bed	71.05	Bridge	NULL	CLR-71050	Existing	2005	Active / Available
	67	Duval Road-Primary	2.45	Bridge	H-106	DVL-2451.6	Existing	1970	Not active / Available
		Hobbit Road	8.85	Bridge	H-109	HBT-8851.0	Existing	1970	Active / Available
		Kississing North Road	7.09	Bridge	H-107	KSR-7089.2	Existing	1970	Active / Available
	68	Limestone Road	11.2	Bridge	H-103	LSR-11198.	Existing	1980	Not active / Available
		Limestone Road	32.24	Bridge	H-104	LSR-32235.	Existing	1980	Not active / Available
		Limestone Road	34.69	Bridge	H-105	LSR-34690.	Existing	1980	Proposed decom. in 1-2 yrs
		Ruddock Road	3.05	Bridge	H-108	RR-3052.73	Existing	2003	Not active / Available
	68	Transit Road	4.77	Bridge	H-102	TSR-4773.1	Existing	1980	Not active / Available
		Chisel Rail Bed	71.05	Bridge	NULL	CLR-71050	Existing	2005	Active / Available
		Duval Road-Primary	2.45	Bridge	H-106	DVL-2451.6	Existing	1970	Not active / Available
		Hobbit Road	8.85	Bridge	H-109	HBT-8851.0	Existing	1970	Active / Available
83		Thicket Creek Road	24.54	Bridge	NULL	THI-24538	Existing	1970	Decommissioned
84	Bruneau Road	2.6	Bridge	N-102	BRN-2600.0	Existing	2004	Proposed decom. in 1-2 yrs	
	Jonas Road South	11.73	Bridge	N-100	JNS-11730.	Existing	1980	Temporarily decommissioned	
	Radar Lake Road	5.03	Bridge	N-5	RDR-5025.8	Existing	2001	Proposed decom. 2-5 yrs	
Nelson River	85	Partridge Crop Road (Prov)	1.93	Bridge	N-2	PRT-1-1925	Existing	1990	Active / Available
	87	Buckingham Lake Road (CKP)	2.12	Culvert -Metal Corrugated	N-6	BKG-2115.0	Existing	1999	Temporarily decommissioned
		Buckingham Lake Road (CKP)	10.54	Bridge	N-8	BKG-10543.	Existing	1999	Temporarily decommissioned
	Jonas Road North (Prov)	21.89	Bridge	N-101	JON-2-1737	Existing	1980	MI transfer	

## Appendix F – Forest Renewal Activities

Forest renewal activities that have occurred between 1997 and 2021 within each forest section across FML 2.

Forest Section	Operation Type	Area (ha)					
		1997-1999	2000-2005	2006-2010	2011-2015	2016-2020	2021
Saskatchewan River	Even-aged management						
	Natural regeneration	-	224	318	97	2	-
	Assisted regeneration						
	Planting	1,622	5,069	5,886	5,079	3,583	238
	Seeding – Aerial	-	-	314	-	-	-
	Scarification for natural	2,899	4,248	3,949	3,306	578	855
	Total even-aged management	4,521	9,542	10,468	8,482	4,164	1,093
	Site preparation						
	Mechanical	2,023	4,808	472	-	-	-
	Total site preparation	2,023	4,808	472	-	-	-
	Tending						
	Mechanical spacing	-	-	-	-	4	-
	Chemical – Aerial	624	747	390	2,921	3,586	1,894
Total tending	624	747	390	2,921	3,591	1,894	
Highrock	Even-aged management						
	Natural regeneration	-	175	-	73	-	-
	Assisted regeneration						
	Planting	3,045	5,398	7,379	4,864	801	25
	Seeding – Aerial	-	-	-	-	-	-
	Scarification for natural	1,043	1,395	781	1,154	269	-
	Total even-aged management	4,088	6,967	8,159	6,090	1,071	25
	Site preparation						
	Mechanical	2,493	3,032	312	-	6	-
	Total site preparation	2,493	3,032	312	-	6	-
	Tending						
	Mechanical spacing	-	-	-	-	4	-
	Chemical – Aerial	133	321	239	1,358	2,235	-
Total tending	133	321	239	1,358	2,235	-	

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Forest Section	Operation Type	Area (ha)					
		1997-1999	2000-2005	2006-2010	2011-2015	2016-2020	2021
Nelson River	Even-aged management						
	Natural regeneration	-	19	-	-	-	-
	Assisted regeneration						
	Planting	4,504	14,062	7,345	351	563	-
	Seeding – Aerial	-	-	-	-	-	-
	Scarification for natural	-	168	201	-	-	-
	Total even-aged management		4,504	14,249	7,545	351	563
	Site preparation						
	Mechanical	5,964	10,266	389	-	-	-
	Total site preparation	5,964	10,266	389	-	-	-
	Tending						
	Mechanical spacing	-	-	-	-	-	-
Chemical – Aerial	410	903	1,374	2,440	2,988	-	
Total tending	410	903	1,374	2,440	2,988	-	

## Appendix G – FRI/FLI Reference List

Forest resource and forest lands inventories (FRI/FLI) and analyses referenced by the Province when compiling the landbase provided to NPMC for use in the 20-year forest management planning process.

Forest Section	FMU	Reference
Saskatchewan River	50	Forest Resources Inventory and Analysis - FMU 50. 1995. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Resources Inventory and Analysis - FMU 50. 1996. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Lands Inventory and Analysis - FMU 50. 2001. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
	53	Forest Resources Inventory and Analysis - FMU 53. 1996. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
	57	Forest Resources Inventory and Analysis - FMU 57. 1995. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Resources Inventory and Analysis - FMU 58. 1995. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Resources Inventory and Analysis - FMU 58. 1996. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
	58	Forest Lands Inventory and Analysis - FMU 58. 2001. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Resources Inventory and Analysis - FMU 59. 1995. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
Forest Resources Inventory and Analysis - FMU 59. 1996. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.		
Highrock	60	Forest Lands Inventory and Analysis - FMU 60. 2007. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Lands Inventory and Analysis - FMU 60. 2009. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
	67	Forest Resources Inventory and Analysis - FMU 67. 1983. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Lands Inventory and Analysis - FMU 67. 2007. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Lands Inventory and Analysis - FMU 67. 2009. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
	68	Forest Resources Inventory and Analysis - FMU 68. 1983. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Resources Inventory and Analysis - FMU 68. 1987. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Lands Inventory and Analysis - FMU 68. 2007. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
	69	Forest Lands Inventory and Analysis - FMU 68. 2009. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
Forest Resources Inventory and Analysis - FMU 69. 1983. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.		
Forest Resources Inventory and Analysis - FMU 69. 1987. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.		
Nelson River	800	Forest Lands Inventory and Analysis - FMU 69. 2009. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Resources Inventory and Analysis - FMU 800. 1985. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Lands Inventory and Analysis - FMU 800. 2011. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
	801	Forest Lands Inventory and Analysis - FMU 800. 2013. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Resources Inventory and Analysis - FMU 801. 1985. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Lands Inventory and Analysis - FMU 801. 2011. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
	802	Forest Lands Inventory and Analysis - FMU 801. 2012. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Lands Inventory and Analysis - FMU 801. 2013. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
		Forest Resources Inventory and Analysis - FMU 802. 1985. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.
802	Forest Resources Inventory and Analysis - FMU 802. 1989. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.	
	Forest Resources Inventory and Analysis - FMU 802. 1991. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.	
	Forest Lands Inventory and Analysis - FMU 802. 2011. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.	
		Forest Lands Inventory and Analysis - FMU 802. 2013. Province of Manitoba. Forestry and Peatlands Branch, Inventory and Analysis Section.



## Appendix H – Descriptions of Provincial Parks

Provincial parks within FML 2, including adjacent communities, options for accommodation, waterbodies that can be accessed, facilities and/or amenities offered within or nearby the park (as noted), and if mining is allowed to occur within the park boundaries.

Provincial Park	Adjacent Communities	Accommodations	Water Access	Facilities/Amenities	Mining allowed?
Bakers Narrows	Flin Flon Airport	Campgrounds Yurts  Five cottage subdivisions (~150 cottages)	Athapapuskow Lake Bakers Narrows	Beaches Boat launch Picnic area/Shelters Playgrounds Showers Viewing tower	No
Clearwater Lake	Opaskwayak Cree Nation The Pas	Campgrounds Yurts  Resorts/Bed & Breakfast (Privately operated) Lodges (Privately operated)  Multiple cottage subdivisions (> 380 cottages)  Girl Guides of Canada/ Scouts Canada sites	Clearwater Lake	Beaches Boat launch Changes rooms Concessions District office Picnic area/Shelters Playgrounds Recreational trails Showers Viewing tower	Yes
Grand Rapids	Misipawistik Cree Nation Grand Rapids Grand Rapids Airport	Campgrounds (Nearby outside of park; Privately operated)  Cabins (Nearby outside of park; Privately operated)	N/A	N/A	No
Grass River	Opaskwayak Cree Nation Cranberry Portage	Campgrounds Backcountry camping  Lodges (Privately operated)	Staging/Stopping point for Grass River canoe route	Beach Boat launch Concessions District office Picnic areas/Shelters Playgrounds Recreational trails Showers	Yes

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Provincial Park	Adjacent Communities	Accommodations	Water Access	Facilities/Amenities	Mining allowed?
Little Limestone Lake	Mosakahiken Cree Nation	N/A Visitors access the lake across First Nation land and may camp there or on First Nation land <b>along the lake's shoreline with the permission of the Mosakahiken Cree Nation.</b>	Little Limestone Lake	N/A	No
Neso Lake	N/A	N/A	Staging/Stopping point for Mistik Creek canoe route	Boat launch Picnic areas/Shelters	No
Overflowing River	Sapotaweyak Cree Nation	Campgrounds (Privately operated)	Overflowing River Lake Winnipegosis	Boat launch (Privately operated) Picnic area/Shelters (Privately operated)	No
Paint Lake	Thompson	Campgrounds Backcountry camping Yurts  Cottages Resort (Privately operated)	Paint Lake Mid Lake Staging/Stopping point for Grass River canoe route	Beaches Boat launch & docks Groceries/Gasoline (Privately operated) Park office Picnic areas/Shelters Playgrounds Recreational Trails Restaurants (Privately operated) Showers	Yes
Pisew Falls	N/A	Backcountry camping sites near the park on the Kwasitchevan Falls hiking trail	Grass River	Hiking trail Picnic areas/Shelters	No
Rocky Lake	Wanless	Campgrounds  Cabins (Privately operated) Lodge (Privately operated)	Rocky Lake	Boat launch & dock (Privately operated) Showers (Privately operated)	No
Sasagiu Rapids	N/A	Campground (Privately operated)  Sasagiu Rapids lodge directly south	Setting Lake Grass River	Boat launch (Privately operated)	No
Twin Lakes	N/A	Adjacent to a Northern Affairs cottage subdivision	Twin Lake	Boat launch	No

2027-2046 FML 2 Forest Management Plan – Appendix H – Descriptions of Provincial Parks

Provincial Park	Adjacent Communities	Accommodations	Water Access	Facilities/Amenities	Mining allowed?
Wekusko Falls	Snow Lake – Many residents use this park	Campground  Nearby Wekusko Falls Lodge offers cabin rentals	Wekusko Lake Staging/Stopping point for Grass River canoe route	Boat launch & dock Picnic areas/Shelters Playgrounds Showers  Nearby Wekusko Falls Lodge offers boat rentals, hunting, fishing, and outfitting services	Yes

## Appendix I – Legislation and Policies Relevant to Forest Management

*Pertinent legislation, policies, and guidance utilized by NFMC during the forest management planning process. This appendix is not exhaustive.*

Type	Title	CCSM	Relevancy
Provincial Act	<i>The Crown Lands Act (1988)</i>	C340	7(1)(c) - The minister may, upon such terms and subject to such conditions, including the amount of any fee, rent or royalty payable, as are prescribed by the Lieutenant Governor in Council, issue work permits authorizing specified work to be performed on Crown lands and authorizing entry upon the Crown lands for purposes of the work ;7.1(2) - The minister may impose terms and conditions on a work permit issued under this section or under clause 7(1)(c).
Provincial Act	<i>The Dangerous Goods Handling and Transportation Act</i>	D12	S8 - Must have licence to transport hazardous waste. S12 - Must have manifest. S14 - Safe handling per regulation. S28 - Report environmental accident.
Provincial Regulation	Dangerous Goods Handling and Transportation Regulation	55/2003	Personal exemption requires transport of less than 150 kg total of Gasoline or propane in certified containers not larger than 30 kg per container in one vehicle.
Provincial Regulation	Environmental Accident Reporting Regulation	439/87	This is the basis of our reporting requirement in our spill EPPs.
Provincial Regulation	Hazardous Waste Regulation	195/2015	Lists glyphosate leechate as a hazardous waste - category 4 SCH C; S4(2) - exempt from registration if transporting from environmental accident site in compliance with officer's instruction; S5-10 - storage requirements; S13 licence exemption for transporting solely on private property and if under 5 kg/L of hazardous waste or 20 L of used oil; PCS exempt under conditions 2(2)(d/e).
Provincial Regulation	Storage and Handling of Petroleum Products an Allied Products Regulation	188/2001	Adopts CCME 2003 Code of Practice; partial application for tanks under 5000 L which all, EXCEPT ONE NRL tank, are - S1/2/4/5/8/9/36-41; S 5(2) exemption from regulation if tank/drum 230 L or less.
Provincial Act	<i>The Endangered Species and Ecosystems Act (1990)</i>	E111	Generally exempted under the <i>Environment Act</i> Licence (EAL), NFC needs to remain aware of any changes to ecosystem preservation zones that could affect our exemption.
Provincial Regulation	Endangered and Threatened Ecosystems Regulation	70/2015	Listing of endangered and threatened ecosystems, we need to monitor any changes to this list and determine if it could be affected by our operations.

Type	Title	CCSM	Relevancy
Provincial Act	<i>The Environment Act (1988)</i>	E125	Details licencing application and hearing requirements for class 1/2/3 developments; S30.1 no person shall release pollutants; S40.6 exemption for prohibition on use of pesticides for forestry activities; comply with pesticide use regulations
Provincial Regulation	Litter Regulation	92/88 R	2 - No person shall deposit or leave or cause or permit the depositing or leaving of litter upon any land, water, or ice.
Provincial Regulation	Notice and Reporting Regulation	126/2010	Duty to report any "pollutant" released into the environment to spill report line (944-4888). Lists the information required when making a report.
Provincial Regulation	Pesticides Regulation	94/88 R	Considerable amount of sections that apply to our program.
Provincial Act	<i>The Forest Act (1988)</i>	F150	Requires a scaler to have a permit, requirement for a harvest permit and compliance with terms, no possession of illegally harvested timber, payment of dues, meeting renewal obligation.
Provincial Regulation	Forest Use and Management Regulation	227/88 R	S5-13 harvest and utilization requirements, S19 Operating plan, S20 annual reporting, S25-S32.1 Timber Sales, S33-43.3 timber permits, S 44/44.1 scaling, S48 loadslips, S49-49.2 timber returns, S50-50.2 timber dues, S59-59.1 scaler's licence, demonstrating ownership of private wood
Provincial Act	<i>The Forest Health Protection Act</i>	F151	Forest threats, protection of heritage trees, comply with directions RE: Forest threats, comply with inspectors/officers.
Provincial Regulation	Forest Health Protection Regulation	87/2009	Comply with any regulation prescribed by the director. Comply with direction of inspector or officer. Ensure no pine purchase wood is sourced from AB/BC AB-SK interprovincial parks or certain US states
Provincial Act	<i>The Heritage Resources Act (1986)</i>	H39.1	Conduct heritage assessments on any developments within heritage sites or with minister's Notice of Intent, do not conduct any work in these areas until heritage permit has been issued, no person shall destroy/damage/remove/excavate a heritage object unless prescribed in heritage permit.
Provincial Act	<i>The Mines and Minerals Act (1991)</i>	M162	Part 8 - Quarry Minerals: production of quarry minerals on crown land requires quarry permit/lease, comply with permit conditions including remedial work, file annual returns, do not destroy claim posts/stakes/boundary lines/etc.
Provincial Regulation	Quarry Minerals Regulation	65/92	Casual quarry permit application, annual statement (returns), general conditions including removal/disposal of timber on quarry sites; removal and stockpiling of overburden; blasting conditions and metrics; etc. - all things stipulated in permit.

Type	Title	CCSM	Relevancy
Provincial Act	<i>The Off-Road Vehicles Act</i>	O31	24(2) - ATVs need spark arrestors.
Provincial Act	<i>The Pesticides and Fertilizers Control Act</i>	P40	Must have a commercial applicator's licence to apply pesticides. Specifics in the regulations.
Provincial Regulation	Pesticides and Fertilizers Licence Regulation	216/87 R	Commercial applicator might have to take course or otherwise satisfy minister to attain licence, comply with conditions of licence/permit, S6(4) details information that needs to be recorded by applicator within 24 hours of applying pesticides, S10 details minimum insurance requirements
Provincial Act	<i>The Water Protection Act</i>	W65	The L G in C may make regulation designating an area as a water protection zone in which activities occurring in these zones would be regulated. At this time not in water protection zone.
Provincial Regulation	Aquatic Invasive Species Regulation	173/2015	If company/contractor boating activities taking place in Central/Saskatchewan River-Cedar Lake/Nelson River control zones ensure compliance with boat decontamination regulations, currently no boating in these zones
Provincial Act	<i>The Wildfires Act (1977)</i>	W128	General duty to control fires, duty to report, must have valid work permit for "operation that is likely to cause the accumulation of slash or debris", burning permit required for outdoor fires inside of wildfire season April 1 to November 15, industrial operations may have to submit annual fire control plan.
Provincial Act	<i>The Wildlife Act (1988)</i>	W130	S15(1) - Must have valid licence to hunt/trap; S20 - prohibition on protected species listed in act Div 6; S39 - Do not remove/destroy traps; S49 - Do not destroy nest or eggs of species Div 6 of Sch A - includes birds under MBCA; S50(1) - do not destroy wildlife habitat except pursuant to licence/permit;
Provincial Regulation	Designation of Wildlife Lands Regulation	171/2001	Details various wildlife lands. Currently Part 6 (WMAs) and Part 7 (SCAs) are on FML. Ensure all wildlife lands are displayed on OP maps.
Provincial Regulation	Use of Wildlife Lands Regulation	77/99	Ensure no commercial activity in protected portions of WMAs; ensure proper licence/permit in place for forestry activities in designated portions of WMAs/SCAs.
Provincial Regulation	Wildlife Protection Regulation	85/2003	S6.6 - do not destroy black bear den; Otherwise nothing really applicable to date - mostly to do with wildlife disease control
Federal Act	<i>First Nations Land Management Act (1999)</i>	S.C.1999, c.24	Ensure any forestry activities occurring on Reserve lands comply with land code

Type	Title	CCSM	Relevancy
Federal Act	<i>Fisheries Act</i> (1985)	R.S.C., 1985, c. F-14	S20(4) - do not obstruct fish passage; S35(1) - do not undertake works that obstruct/harm commercial/recreational/aboriginal fishery; S36 - do not deposit deleterious substance to any fish-bearing water body; S 38(4/5) - duty to notify serious harm to fish or deleterious substance; S38(6/7/7.1) - duty to report and duty to take corrective action;
Federal Act	<i>Migratory Birds Convention Act</i> (1994)	S.C. 1994, c. 22	S5.1 - do not deposit substance harmful to migratory bird or waters; S11.24 comply with order given by inspecting officer; S12 comply with regulations; Schedule lists bird species protected under the Convention - essentially any bird not covered here is covered under provincial Wildlife Act. Only birds not covered under either are the American Crow and a couple blackbird species (blackbirds, grackle, cowbird); Articles II and IV of the Convention reference habitat protection.
Federal Act	<i>Navigation Protection Act</i> (1985)	R.S.C., 1985, c. N-22	Requires permitting from TC for certain "work" related to "navigable water" as defined in the Act.
Federal Regulation	Navigable Waters Works Regulations	C.R.C., c. 1232	S5 no equipment/tools to be left in water after construction of works; S6 must remove debris created by construction/maintenance of work; S8/9 is NA as it refers to natural resource development occurring in or along navigable water.
Federal Act	<i>Species at Risk Act</i> (2002)	S.C. 2002, c. 29	S 32(1) - no person shall kill/harm etc End/Ext/Th species; S33 do not destroy residence of such species; S 34(1) S 32/33 do not apply to provincial lands for species that are not aquatic or listed under MBCA unless order in place; S 58(1) - no person shall destroy critical habitat; S 61(1) - no person shall destroy critical habitat of provincially-listed species; S 62 minister may enter into agreement to acquire lands from gov't or organization; S73(1) - minister may issue permit prescribing activities to reduce impact to species at risk; S91/92 - assistance and obstruction of officers; At this time no orders or emergency orders for species occurring on FML.
Federal Act	<i>Transportation of Dangerous Goods Act</i> (1992)	S.C. 1992, c. 34	Refer to regulation - Aspects that apply to a Consignee (public / personal use)
Federal Regulation	Transportation of Dangerous Goods Regulations	SOR/2001-286	Stay within quantity limits for gasoline/propane exemption - 150 kg gasoline and 500 kg propane AND no more than five means of containment. Individual means of containment must not exceed 46 liters (50 lb propane tank).

## Appendix J – Concordance Table

Manitoba Agriculture and Resource Development 20-Year Forest Management Plan Guideline	Nisokapawino Forest Management Corporation FML 2 20-Year Forest Management Plan for
2.0 Planning Process Steps	Appendix T – Terms of Reference
3.0 Terms of Reference	Appendix T – Terms of Reference
4.0 Engagement Strategy	Engagement Strategy Appendix U – Engagement Activity Details
4.1 Engagement Plan	Appendix T – Terms of Reference
4.2 Minimum Requirements for Engagement	Engagement Strategy Appendix U – Engagement Activity Details
4.3 Plain Language Summary	<i>To come following passing of the FMP completeness check.</i>
4.4 Engagement Reporting	Engagement Strategy Appendix U – Engagement Activity Details <i>Supplemental reporting information provided to the Province for internal use and review.</i>
5.0 Stakeholder Advisory Committee	Engagement Strategy Appendix T – Terms of Reference <i>Existing Sustainable Forest Management Committee served as the stakeholder/public advisory group.</i>
6.0 Executive Summary	Executive Summary
7.0 Forest Management Plan Requirements: Part 1 – Planning Context	Part 1 – Planning Context
7.2 Physical Description	2 Ecological and Physical Description <ul style="list-style-type: none"> <li>2.2 Climate</li> <li>2.3 Soils</li> <li>2.4 Surficial Geology</li> <li>2.5 Terrestrial and Aquatic Flora and Fauna</li> <li>2.6 Water Resources</li> <li>2.7 Wetlands</li> <li>2.9 Physical Infrastructure</li> </ul> 5 Socioeconomic Conditions <ul style="list-style-type: none"> <li>5.9 Recreation and Tourism               <ul style="list-style-type: none"> <li>5.9.7 Provincial Parks</li> </ul> </li> </ul> 6 Forest Administration <ul style="list-style-type: none"> <li>6.2 Ownership and Status               <ul style="list-style-type: none"> <li>6.2.5 Provincial, National, and Recreational Parks</li> <li>6.2.6 Protected Areas, Areas of Special Interest, OECMs, and Wildlife Management Areas</li> </ul> </li> </ul>
Historical Forest Description	3 Historical Forest Description

Manitoba Agriculture and Resource Development 20-Year Forest Management Plan Guideline	Nisokapawino Forest Management Corporation FML 2 20-Year Forest Management Plan for
Current Forest Description	4 Current Forest Description
7.3 Socio Economic Conditions	5 Socio Economic Conditions
7.4 Forest Administration	6 Forest Administration 2 Ecological and Physical Description 2.1 Ecozones and Ecoregions
7.5 Corporate Overview and Facility Description	1 Corporate Overview and Facility Description
7.6 Legislation and Policy	7 Legislation and Policy
7.7 Quota Holders, Timber Sales, Special Allocations and Third-Party Operations	6 Forest Administration 6.3 Quota Holders, Timber Sales, Special Allocations, and Third-Party Operations
7.8 Certification Audits	6 Forest Administration 6.4 Forest Certification Systems 17 Monitoring and Reporting 17.3 Standard Certification Monitoring and Assessment
8.1 Resource Analysis	8 Resource Analysis
8.2 Values, Objectives, Indicators, and Targets	9 Values, Objectives, Indicators, and Targets
Criteria and Indicators for Assessing Sustainability	9 Values, Objectives, Indicators, and Targets Appendix N – Values, Objectives, Indicators, and Targets Table
8.3 Forest Modelling Landbase Net Down and Description	10 Forest Modelling 10.1.2.1 Landbase
8.4 Modelling Wildlife Habitat and Habitat Elements	11 Modelling Wildlife Habitat and Habitat Elements
8.5 Scenario Analysis	12 Scenario Analysis
8.6 Preferred Management Scenario – Selection Process	13 Preferred Forest Management Scenario
8.7 Cumulative Effects	15 Cumulative Effects
8.8 Climate Change Adaptation	14 Climate Change Adaptation
9.1 Implementation Strategies	16 Implementation Strategies
Harvest Operations	16.3 Harvest Operations
Road Development, Access Management, and Other Infrastructure	16.2 Road Development, Access Management, and Other Infrastructure
Forest Renewal	16.4 Forest Renewal
Silvicultural Prescriptions	16.4.2 Silvicultural Prescriptions
Operating Practices	16.5 Operational Best Management Practices

Manitoba Agriculture and Resource Development 20-Year Forest Management Plan Guideline	Nisokapawino Forest Management Corporation FML 2 20-Year Forest Management Plan for
9.2 Monitoring and Assessment Reporting	17 Monitoring and Assessment 17.1 Reporting
9.3 Research	18 Research

## Appendix K – Model Assumptions by Key

Summary of minimum harvest age, death age, and regeneration age, in years, forest model assumptions by key as provided by the Province (Province of Manitoba, 2014 & 2015).

Key	Minimum Harvest Age (years)	Mortality (Death) Age (years)	Regeneration Age (years)
HR_LBS_LMH_123	90	185	-10
HR_MAP_LMH_123	70	145	0
HR_MWD_H_123	75	155	-5
HR_NWD_H_123	75	155	0
HR_NWD_LM_123	80	160	0
HR_OTHHW_H_123	75	155	0
HR_OTHHW_LM_123	80	160	0
HR_OTHSW_L_123	85	175	-5
HR_OTHSW_MH_123	85	155	-5
HR_PJP_H_123	75	155	-5
HR_PJP_L_123	90	160	-5
HR_PJP_M_123	95	155	-5
HR_PTA_LMH_123	80	155	0
HR_STL_LMH_123	85	185	-10
HR_SWD_H_123	90	185	-5
HR_SWD_L_123	95	175	-5
HR_SWD_M_123	95	175	-5
HR_UBS_L_123	100	185	-5
HR_UBS_MH_1	100	170	-5
HR_UBS_MH_2	90	160	-5
HR_UBS_MH_3	100	160	-5
SK_HDWD_0_1	80	140	0
SK_HDWD_0_23	80	140	0
SK_JP_0_1	70	130	-5
SK_JP_0_2	70	130	-5
SK_JP_1_3	75	130	-5
SK_JP_2_3	75	130	-5
SK_LBS_0_1	90	180	-10
SK_LBS_0_2	95	180	-10
SK_LBS_0_3	95	180	-10
SK_MSPF_0_1	75	140	-5

Key	Minimum Harvest Age (years)	Mortality (Death) Age (years)	Regeneration Age (years)
SK_MSPF_0_2	75	140	-5
SK_MSPF_0_3	75	140	-5
SK_NSPF_0_1	75	140	0
SK_NSPF_0_2	75	140	0
SK_NSPF_0_3	75	140	0
SK_SFWD_0_1	75	150	-5
SK_SFWD_0_2	75	150	-5
SK_SFWD_0_3	80	150	-5
SK_STL_0_123	75	180	-10
SK_TA_0_1	70	140	0
SK_TA_0_2	75	140	0
SK_TA_0_3	75	140	0
SK_TLS_0_12	80	180	-10
SK_TLS_0_3	85	180	-10
SK_UBS_0_1	75	180	-5
SK_UBS_0_2	75	180	-5
SK_UBS_0_3	75	180	-5
69_LBS_LMH_123	90	185	-10
69_MAP_LMH_123	70	145	0
69_MWD_LMH_123	75	160	0
69_NWD_LMH_123	75	160	0
69_OTHHW_LMH_123	80	160	0
69_OTHSW_LMH_123	85	175	-5
69_PJP_LMH_123	95	160	0
69_PTA_LMH_123	80	155	0
69_STL_LMH_123	85	185	-10
69_SWD_LMH_123	90	175	-5
69_UBS_LMH_1	100	170	-5
69_UBS_LMH_123	100	160	-5
69_UBS_LMH_2	90	160	-5
69_UBS_LMH_3	100	160	-5



