

Appendix 3: Miscellaneous

Appendix 3, with all the sub-appendices, provides additional information to support the SFM Plan for the DFA.

Appendix 3.1: Cross Reference Matrices

This appendix contains a number of matrices comparing CSA to other initiatives: i.e. LRMP and FRPA

- 1) Fort Nelson C&I vs. LRMP Matrix
- 2) Fort Nelson C&I vs. FRPA Matrix

Appendix 3.2: Glossary & Acronym List

This appendix contains a glossary for the SFM Plan. This glossary was generated from the PRISM process.

- 1) Glossary & Acronym List

Appendix 3.3: Citations

This appendix contains a listing of citations made throughout the SFM Plan.

- 1) Citation Listing

Criteria and Element comparison to the LRMP

Criteria	Element	Indicator	Target	LRMP Value	LRMP Objective
1.0 Biological Diversity	1.1 Ecosystem Diversity	1.1.1 Ecosystem area by type	A) 100 percent of rare and uncommon ecosystems will have special management strategies associated with them (variance of 0 percent)	Biodiversity	Maintain Biodiversity throughout the plan area
			B) 100 percent of the strategies for rare and uncommon ecosystems will be followed (variance of 5 percent)	Biodiversity	Maintain rare ecosystems , habitat types and plant and animal species
		1.1.2 Forest area by type or species composition	Maintain percent distribution of forest type >20 years old across the DFA (variance of 5 percent)	Biodiversity	Identify and map suitable sites for maintaining representative, natural functioning areas
		1.1.3 Forest area by seral stage or age class	Percent of late seral stage forest distribution by NDU is maintained at the legal target for old growth as set out by NSOGO or established OGMA's <u>or</u> trend positive towards meeting target (variance of 0 or show positive trend)	Biodiversity	Maintain old growth attributes on specified sites within landscapes
		1.1.4.1 Degree of within stand structural retention – WTP percentage	100 percent conformance with 7 percent minimum WTP by landscape unit and by block. Where LU's start out below the 7 percent, show positive trend (variance of 0)	Wildlife	Provide for habitat needs of all wildlife
		1.1.4.2 Degree of Within stand structural retention – Dispersed retention	100 percent of blocks will meet the minimum of 7 or more combined mature trees/stubs per hectare of all harvested blocks in the reporting year (variance of 0)	Wildlife	identify and map important habitat elements

Criteria and Element comparison to the LRMP

Criteria	Element	Indicator	Target	LRMP Value	LRMP Objective
		1.1.4.3 Degree of within stand structural retention – Riparian management	0 Non-conformances where forest operations are not consistent with riparian management strategies (variance of 0)	Wildlife	Industrial development should avoid riparian connectivity areas or where development proceeds, impacts should be minimized
		1.1.5 Shrub Habitat across the DFA	A) Sustain current baseline of shrub habitat percentage in the THLB (variance of 0.5 percent)	Wildlife	Manage forests for a diversity of age classes and forest stand structure across the landscape.
			b) Monitor shrub habitat in the NHLB	Wildlife	Maintain effective spatial and temporal habitat continuity
	1.2 Species Diversity	1.2.1 Degree of habitat protection for selected focal species including species at risk	100 percent conformance with management strategies for species of management concern (variance of 0 percent)	Wildlife	special attention will be paid to red and blue listed species and regionall important species
		1.2.2 Degree of suitable habitat in the long term for selected focal species including species at risk	As previous indicator	Wildlife	Ensure high capability sites are maintained in a suitable state
		1.2.3 Proportion of regeneration comprised of native species	100 percent conformance with the chief forester's standards for seed use (variance of 0 percent)	Forestry	Encourage silvicultural systems that are compatiable with other resource values
	1.3 Genetic Diversity	1.3.1 Percentage of stands reforestation programs free of genetically modified organisms	100 percent of stands free of GMO's	N/A	Not addressed in LRMP

Criteria and Element comparison to the LRMP

Criteria	Element	Indicator	Target	LRMP Value	LRMP Objective
	1.4 Protected Areas and sites of special biological and cultural significance	1.4.1 Proportion of identified sites with implemented management strategies	100 percent of forest management activities in conformance with management strategies fro protected areas and site of biological significance	Protected Areas	Protect speciefic land for their special value for wildlife, wilderness, recreation, culture and heritage and as representative examples of natural diversity found in each of the provinces ecosections
		1.4.2 Protection of identified sacred and culturally important sites	100 percent of identified aboriginal forest values, knowledge and uses considered in forestry planning processes (variance of 0 percent)	First Nations, heritage and culture	Recognize and maintain cultural heritage resources
2.0 Ecosystem condition and resilience	2.1 Forest ecosystem resilience	2.1.1.1 Reforestation success – Regen delay	100 percent of stands will meet a regen delay of 3 years or less (variance site plan specific)	Forestry	Maintain or enhance the continued sustainable supple of timber
		2.1.1.2 Reforestation success – Free Growing	100 percent compliance with free growing time frames prescribed in the site plans.	Forestry	Maintain or enhance the continued sustainable supple of timber
		2.1.1.3 Percentage of silviculture obligation areas with significant detected forest health damaging agents which have treatment plans	100 percent of sites with significant forest health damaging issues will have a treatment plan developed and implemented within one year	Forestry	Minimize non-recoverable loss through agressive forest fire suppression and perst managment , salvage of damaged or killed timber and prompt reforestation and stand management regimes

Criteria and Element comparison to the LRMP

Criteria	Element	Indicator	Target	LRMP Value	LRMP Objective
		2.1.1.4 Evidence of efforts being made to manage known significant forest health damaging agents	A) Report out on percentage of harvest activity that is focussed on treatment of stands damaged by or susceptible to damage by natural events or damaging agents	Forestry	Minimize non-recoverable loss through aggressive forest fire suppression and pest management, salvage of damaged or killed timber and prompt reforestation and stand management regimes
			B) Report out on participation in management efforts within the DFA for significant forest health damaging issues	Forestry	Promote investment in forest inventory information
	2.2 Forest ecosystem productivity	2.2.1 Additions or deletions to the forest area	Less than 3 percent of the CFLB converted to non-forest land use through forest management activities (variance of 0 percent)	Soils	Minimize soil productivity losses
		2.2.2 Proportion of the calculated long term sustainable harvest level that is actually harvested	100 percent of AAC harvested over a 5 year period (variance of 10 percent)	Forestry	Balance utilization levels in consideration of other resources
3.0 Soil and Water	3.1 Soil quality and quantity	3.1.1 Level of soil disturbance	100 percent of harvested blocks meet soil disturbance objective identified in the site plan	Soils	Implement soil disturbance guidelines for all activities
		3.1.2 Level of downed woody debris	100 percent of harvest blocks will meet prescribed coarse woody debris targets (variance of 10 percent)	Wildlife	Identify and map important habitat elements

Criteria and Element comparison to the LRMP

Criteria	Element	Indicator	Target	LRMP Value	LRMP Objective
	3.2 Water quality and quantity	3.2.1.1 Proportion of watershed or water management areas with recent stand replacing events - Watersheds	100 percent of sensitive water sheds found to be above peak flow will have further assessment done and strategies created for water management	Water	Identify priority watersheds and conduct the appropriate level of watershed assessment and implement resulting recommendations in operational plans
		3.2.1.2 Proportion of watershed or water management areas with recent stand replacing events - Roads	100 percent of high hazard drainage structures within sensitive watersheds will have mitigative strategies implemented	Water	Minimize man-made impacts to stream configurations
4.0 Role in global ecological cycles	4.1 Carbon uptake and storage	4.1.1.1 Net Carbon Uptake – Total carbon storage	Maintain or increase baseline 1.75 mega tonnes of total ecosystem carbon in the productive CFLB (variance of -10 percent)	N/A	Not addressed in LRMP
		4.1.1.2 Net Carbon Uptake – Carbon sequestration rate	Maintain or increase baseline 0.93 mega tonnes of carbon per year sequestration rate in the THLB and 0.55 mega tonnes carbon sequestration rate in the NHLB (variance of -10 percent)	N/A	Not addressed in LRMP
		4.1.2 Reforestation Success (covered by 2.1.1)	As per 2.1.1	As per 2.1.1	As per 2.1.1
	4.2 Forest land conversions	4.2.1.1 Additions and deletions to the forest area (covered by 2.2.1)	As per 2.2.1	As per 2.2.1	As per 2.2.1
		4.2.1.2 Evidence of best efforts to coordinate forest management activities with the oil and gas industry	100 percent of annual planned block and road activities submitted to the oil and gas commission	Energy	Maintain opportunities and access for oil and gas exploration, development and transportation

Criteria and Element comparison to the LRMP

Criteria	Element	Indicator	Target	LRMP Value	LRMP Objective
5.0 Economic and social benefits	5.1 Timber and non timber benefits	5.1.1.1 Quantity and quality of timber and non-timber benefits, products and services produced in the DFA - Timber	As per 2.2.2	As per 2.2.2	As per 2.2.2
		5.1.1.2 Quantity and quality of timber and non-timber benefits, products and services produced in the DFA – Non-Timber	100 percent conformance with strategies for non-timber forest products (variance of 0 percent)	1) Guide Outfitting 2) Outdoor Recreation and tourism 3) Trapping	1) Recognize the rights of existing guide outfitting tenures 2) Provide opportunities for a diverse range of recreational values and uses across the biophysical settings of the planning area 3) Provide and maintain opportunities for trapping
		5.1.1.3 Participants forest management activities will not negatively impact established recreational sites and trails	100 Percent of activities will take place outside of established recreation sites and trails (variance allowed for forest health or safety reasons)	Outdoor recreation and tourism	Maintain quality of recreational activities
		5.1.1.4 Forest Management Activities will be consistent with Visual Quality Objectives (VQO's)	100 percent of forest operations will be consistent with established VQO's (variance allowed for forest health or safety reasons)	Visual Quality	Manage for visual quality
	5.2 Communities and sustainability	5.2.1.1 Level of investment in initiatives that contribute to community sustainability	A) Report out percentage of annual budget spent locally on a 5 year rolling average	Forestry	Promote investment in forest resources
			B) Report out total budget spent locally	Jobs and community stability	Natural resources should be utilised to maintain or increase jobs

Criteria and Element comparison to the LRMP

Criteria	Element	Indicator	Target	LRMP Value	LRMP Objective
		5.2.1.2 Amount of Stumpage paid in the Fort Nelson DFA	Report out all stumpage collected in the Fort Nelson DFA	N/A	Not addressed in LRMP
		5.2.2 Level of investment in training and skill development	100 percent of forestry employees and contractors will have EMS/FMS training and Safety Training (variance of 10 percent)	Jobs and community stability	Resource based industries should be maintained or enhanced
		5.2.3 Level of direct and indirect employment	Maintain the level (baseline 2011) level of direct and indirect employment in the Ft Nelson DFA	Jobs and community stability	Natural resources should be utilised to maintain or increase jobs
		5.2.4 Level of Aboriginal participation in the forest economy	Report out number of opportunities for First Nations to participate in the forest economy	Jobs and community stability	Natural resources should be utilised to maintain or increase jobs
6.0 Society's responsibility	6.1 Aboriginal and treaty rights	6.1.1 Evidence of a good understanding of the nature of Aboriginal title and rights	100 percent of Canfor Forest Management Group employees and BCTS Fort Nelson Field team staff will receive First Nations awareness training. (variance of 0 percent)	First Nations, heritage and culture	Avoid infringement of aboriginal and treaty rights
		6.1.2 Evidence of best efforts to obtain acceptance of management plans based on Aboriginal communities having a clear understanding of the plans	100 percent of participants management plans exhibit evidence of best efforts to obtain acceptance aboriginal communities (variance of 0 percent)	First Nations, heritage and culture	Develop management strategies for specific sites at the operational level
		6.1.3 Level of management and/or protection of areas where culturally important practices and activities (hunting fishing, gathering, trapping) occur	100 percent of forest operations in conformance with operational/site plans developed to address aboriginal forest values, knowledge and uses (variance of 0 percent)	First Nations, heritage and culture	Follow existing policies, guidelines or procedures to protect aboriginal or treaty rights

Criteria and Element comparison to the LRMP

Criteria	Element	Indicator	Target	LRMP Value	LRMP Objective
	6.2 Respect for aboriginal forest values, knowledge and uses	6.2.1 Evidence of understanding and use of Aboriginal knowledge through the engagement of willing Aboriginal communities, using a process that identifies and manages culturally important resources and values	100 percent of identified aboriginal forest values, knowledge and uses considered in the forestry planning process (variance of 0 percent)	First Nations, heritage and culture	Recognize and maintain cultural and heritage resources
	6.3 Forest community well being and resilience	6.3.1 Evidence that the organization has cooperated with other forest-dependant businesses, forest users and local community to strengthen and diversify the local economy	Report out the number of purchase/sale/trade relationships with local forest dependant businesses where primary forest products and by products are involved (no variance)	Jobs and community stability	Natural resources should be utilised to maintain or increase jobs
		6.3.2 Evidence of cooperation with DFA-Related workers to improve and enhance safety standards, procedures and outcomes in all DFA-related workplaces and affected communities	100 percent of Participants and their contractors and licensees will implement and maintain a certified safety program (variance of 10 percent)	N/A	Not addressed in LRMP

Criteria and Element comparison to the LRMP

Criteria	Element	Indicator	Target	LRMP Value	LRMP Objective
		6.3.3 Evidence that a worker safety program has been implemented and is periodically reviewed and improved	A) 100 percent of non-conformities identified by external audits will have an action plan developed and implemented in a manner and timeframe acceptable to the auditor (variance of 0 percent)	N/A	Not addressed in LRMP
			B) Annual management review of the safety program will be completed (variance of 0)	N/A	Not addressed in LRMP
	6.4 Fair and effective decision making	6.4.1 Level of Participant satisfaction with the public participation process	80% or greater level of satisfaction indicated by PRISM established and maintained satisfaction surveys (10 percent variance)	N/A	Not addressed in LRMP
		6.4.2 Evidence of efforts to promote capacity development and meaningful participation in general	1 or more educational opportunities for information/training delivered to the PAG	N/A	Not addressed in LRMP
		6.4.3 Evidence of efforts to promote capacity development and meaningful participation in Aboriginal communities	See indicator 6.1.2	As per 6.1.2	As per 6.1.2
	6.5 Information for decision making	6.5.1 Number of people reached through educational outreach	50 or greater people to whom educational opportunities have been provided by the participants or their representatives	N/A	Not addressed in LRMP
		6.5.2 Availability of summary information on issues of concern to the public	Previous years annual report must be made available to the public via the web prior to March 31st of the current reporting year (variance of 0)	N/A	Not addressed in LRMP

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
1.0 Biological Diversity	1.1 Ecosystem Diversity	1.1.1 Ecosystem area by type	A) 100 percent of rare and uncommon ecosystems will have special management strategies associated with them (variance of 0 percent)	Biodiversity	N/A	N/A	N/A
			B) 100 percent of the strategies for rare and uncommon ecosystems will be followed (variance of 5 percent)	Biodiversity	N/A	N/A	N/A
		1.1.2 Forest area by type or species composition	Maintain percent distribution of forest type >20 years old across the DFA (variance of 5 percent)	Biodiversity	N/A	N/A	N/A
		1.1.3 Forest area by seral stage or age class	Percent of late seral stage forest distribution by NDU is maintained at the legal target for old growth as set out by NSOGO or established OGMA's <u>or</u> trend positive towards meeting target (variance of 0 or show positive trend)	General Wildlife measures and Resource Features	70	Resource Features and Wildlife habitat	(1) An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not damage or render ineffective a resource feature. (2) An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not damage or render ineffective a wildlife habitat feature.
		1.1.4.1 Degree of within stand structural retention – WTP percentage	100 percent conformance with 7 percent minimum WTP by landscape unit and by block. Where LU's start out below the 7 percent, show positive trend (variance of 0)	General Wildlife measures and Resource Features	70	Resource Features and Wildlife habitat	(1) An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not damage or render ineffective a resource feature. (2) An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not damage or render ineffective a wildlife habitat feature.
		1.1.4.2 Degree of Within stand structural retention – Dispersed retention	100 percent of blocks will meet the minimum of 7 or more combined mature trees/stubs per hectare of all harvested blocks in the reporting year (variance of 0)	Biodiversity	66	Wildlife tree Retention	(1) If an agreement under completes harvesting in one or more cutblocks during any 12 month period beginning on April 1 of any calendar year, the holder must ensure that, at the end of that 12 month period, the total area covered by wildlife tree retention areas that relate to the cutblocks is a minimum of 7% of the total area of the cutblocks.

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
		1.1.4.3 Degree of within stand structural retention – Riparian management	0 Non-conformances where forest operations are not consistent with riparian management strategies (variance of 0)	Riparian	52	Restrictions in a riparian management zone	(1) A holder of a minor tenure who fells trees in a cutblock within a riparian management zone of a class described in Column 1 must ensure that (a) the percentage of the total basal area within the riparian management zone specified in Column 2 is left as standing trees, and (b) the standing trees are reasonably representative of the physical structure of the riparian management zone, as it was before harvesting:
		1.1.5 Shrub Habitat across the DFA	A) Sustain current baseline of shrub habitat percentage in the THLB (variance of 0.5 percent)	Biodiversity	N/A	N/A	N/A
			b) Monitor shrub habitat in the NHLB	Biodiversity	N/A	N/A	N/A
	1.2 Species Diversity	1.2.1 Degree of habitat protection for selected focal species including species at risk	100 percent conformance with management strategies for species of management concern (variance of 0 percent)	General Wildlife measures and Resource Features	69	General wildlife measures	An authorized person who carries out primary forest activities on an area must comply with each general wildlife measure that applies to the area.
		1.2.2 Degree of suitable habitat in the long term for selected focal species including species at risk	As previous indicator	General Wildlife measures and Resource Features	69	As per 1.2.1	As per 1.2.1
		1.2.3 Proportion of regeneration comprised of native species	100 percent conformance with the chief forester's standards for seed use (variance of 0 percent)	Timber and Forest Health	43	Use of Seed	(4) Unless an alternative is approved under subsection (6), a person who plants trees while establishing a free growing stand must use only seed registered, stored, selected and transferred in accordance with the standards, if any, established by the chief forester.
	1.3 Genetic Diversity	1.3.1 Percentage of stands reforestation programs free of genetically modified organisms	100 percent of stands free of GMO's	Timber and Forest Health	43	Use of Seed	(4) Unless an alternative is approved under subsection (6), a person who plants trees while establishing a free growing stand must use only seed registered, stored, selected and transferred in accordance with the standards, if any, established by the chief forester.

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
	1.4 Protected Areas and sites of special biological and cultural significance	1.4.1 Proportion of identified sites with implemented management strategies	100 percent of forest management activities in conformance with management strategies for protected areas and sites of biological significance	General Wildlife measures and Resource Features	70	Resource Features and Wildlife habitat	70 (1) An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not damage or render ineffective a resource feature. (2) An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not damage or render ineffective a wildlife habitat feature.
		1.4.2 Protection of identified sacred and culturally important sites	100 percent of identified aboriginal forest values, knowledge and uses considered in forestry planning processes (variance of 0 percent)	Cultural Heritage Resources	N/A	N/A	N/A
2.0 Ecosystem condition and resilience	2.1 Forest ecosystem resilience	2.1.1.1 Reforestation success – Regen delay	100 percent of stands will meet a regen delay of 3 years or less (variance site plan specific)	Timber and Forest Health	N/A	N/A	N/A
		2.1.1.2 Reforestation success – Free Growing	100 percent compliance with free growing time frames prescribed in the site plans.	Timber and Forest Health	44	Free Growing stands generally	(1) A person who has an obligation to establish a free growing stand must establish, for areas that have been identified under section 16 (1) [stocking standards] as areas to which this section will apply, a stand that, (a) meets the applicable stocking standards set out in the forest stewardship plan for the area, by the applicable regeneration date specified for the area, and and (b) meets the applicable stocking standards and free growing height set out in the forest stewardship plan for the area by a free growing date that is no more than 20 years from the commencement date, unless the minister permits a later free growing date.

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
		2.1.1.3 Percentage of silviculture obligation areas with significant detected forest health damaging agents which have treatment plans	100 percent of sites with significant forest health damaging issues will have a treatment plan developed and implemented within one year	Timber and Forest Health	N/A	N/A	N/A
		2.1.1.4 Evidence of efforts being made to manage known significant forest health damaging agents	A) Report out on percentage of harvest activity that is focussed on treatment of stands damaged by or susceptible to damage by natural events or damaging agents	Timber and Forest Health	N/A	N/A	N/A
			B) Report out on participation in management efforts within the DFA for significant forest health damaging issues	Timber and Forest Health	N/A	N/A	N/A
	2.2 Forest ecosystem productivity	2.2.1 Additions or deletions to the forest area	Less than 3 percent of the CFLB converted to non-forest land use through forest management activities (variance of 0 percent)	Soils	N/A	N/A	N/A
		2.2.2 Proportion of the calculated long term sustainable harvest level that is actually harvested	100 percent of AAC harvested over a 5 year period (variance of 10 percent)	N/A	N/A	N/A	N/A

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
3.0 Soil and Water	3.1 Soil quality and quantity	3.1.1 Level of soil disturbance	100 percent of harvested blocks meet soil disturbance objective identified in the site plan	Soils	35	Soil Disturbance Limits	<p>(3) An agreement holder other than a holder of a minor tenure who is carrying out timber harvesting must not cause the amount of soil disturbance on the net area to be reforested to exceed the following limits: (a) if the standards unit is predominantly comprised of sensitive soils, 5% of the area covered by the standards unit, excluding any area covered by a roadside work area;</p> <p>(b) if the standards unit not is not predominantly comprised of sensitive soils, 10% of the area covered by the standards unit, excluding any area covered by a roadside work area;</p> <p>(c) 25% of the area covered by a roadside work area.</p>
		3.1.2 Level of downed woody debris	100 percent of harvest blocks will meet prescribed coarse woody debris targets (variance of 10 percent)	Biodiversity	68	Coarse woody Debris	68 (1) An agreement holder who carries out timber harvesting must retain at least the following logs on a cutblock: (b) if the area is in the Interior, a minimum of 4 logs per hectare, each being a minimum of 2 m in length and 7.5 cm in diameter at one end.
	3.2 Water quality and quantity	3.2.1.1 Proportion of watershed or water management areas with recent stand replacing events - Watersheds	100 percent of sensitive water sheds found to be above peak flow will have further assessment done and strategies created for water management	Watersheds	59	Protecting water quality	59 An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not cause material that is harmful to human health to be deposited in, or transported to, water that is diverted for human consumption by a licensed waterworks.

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
		3.2.1.2 Proportion of watershed or water management areas with recent stand replacing events - Roads	100 percent of high hazard drainage structures within sensitive watersheds will have mitigative strategies implemented	Watersheds	59	Protecting water quality	59 An authorized person who carries out a primary forest activity must ensure that the primary forest activity does not cause material that is harmful to human health to be deposited in, or transported to, water that is diverted for human consumption by a licensed waterworks.
4.0 Role in global ecological cycles	4.1 Carbon uptake and storage	4.1.1.1 Net Carbon Uptake – Total carbon storage	Maintain or increase baseline 1.75 mega tonnes of total ecosystem carbon in the productive CFLB (variance of -10 percent)	N/A	N/A	N/A	N/A
		4.1.1.2 Net Carbon Uptake – Carbon sequestration rate	Maintain or increase baseline 0.93 mega tonnes of carbon per year sequestration rate in the THLB and 0.55 mega tonnes carbon sequestration rate in the NHLB (variance of -10 percent)	N/A	N/A	N/A	N/A
		4.1.2 Reforestation Success (covered by 2.1.1)	As per 2.1.1	As Per 2.1.1		As per 2.1.1	As Per 2.1.1
	4.2 Forest land conversions	4.2.1.1 Additions and deletions to the forest area (covered by 2.2.1)	As per 2.2.1	As per 2.2.1		As per 2.2.1	As per 2.2.1
		4.2.1.2 Evidence of best efforts to coordinate forest management activities with the oil and gas industry	100 percent of annual planned block and road activities submitted to the oil and gas commission	N/A	N/A	N/A	N/A

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
5.0 Economic and social benefits	5.1 Timber and non timber benefits	5.1.1.1 Quantity and quality of timber and non-timber benefits, products and services produced in the DFA - Timber	As per 2.2.2	N/A	N/A	N/A	N/A
		5.1.1.2 Quantity and quality of timber and non-timber benefits, products and services produced in the DFA – Non-Timber	100 percent conformance with strategies for non-timber forest products (variance of 0 percent)	N/A	N/A	N/A	N/A
		5.1.1.3 Participants forest management activities will not negatively impact established recreational sites and trails	100 Percent of activities will take place outside of established recreation sites and trails (variance allowed for forest health or safety reasons)	N/A	N/A	N/A	N/A
		5.1.1.4 Forest Management Activities will be consistent with Visual Quality Objectives (VQO's)	100 percent of forest operations will be consistent with established VQO's (variance allowed for forest health or safety reasons)	Visual Quality	N/A	N/A	N/A
	5.2 Communities and sustainability	5.2.1.1 Level of investment in initiatives that contribute to community sustainability	A) Report out percentage of annual budget spent locally on a 5 year rolling average	N/A	N/A	N/A	N/A
			B) Report out total budget spent locally	N/A	N/A	N/A	N/A

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
		5.2.1.2 Amount of Stumpage paid in the Fort Nelson DFA	Report out all stumpage collected in the Fort Nelson DFA	N/A	N/A	N/A	N/A
		5.2.2 Level of investment in training and skill development	100 percent of forestry employees and contractors will have EMS/FMS training and Safety Training (variance of 10 percent)	N/A	N/A	N/A	N/A
		5.2.3 Level of direct and indirect employment	Maintain the level (baseline 2011) level of direct and indirect employment in the Ft Nelson DFA	N/A	N/A	N/A	N/A
		5.2.4 Level of Aboriginal participation in the forest economy	Report out number of opportunities for First Nations to participate in the forest economy	N/A	N/A	N/A	N/A
6.0 Society's responsibility	6.1 Aboriginal and treaty rights	6.1.1 Evidence of a good understanding of the nature of Aboriginal title and rights	100 percent of Canfor Forest Management Group employees and BCTS Fort Nelson Field team staff will receive First Nations awareness training. (variance of 0 percent)	N/A	N/A	N/A	N/A
		6.1.2 Evidence of best efforts to obtain acceptance of management plans based on Aboriginal communities having a clear understanding of the plans	100 percent of participants management plans exhibit evidence of best efforts to obtain acceptance aboriginal communities (variance of 0 percent)	N/A	N/A	N/A	N/A

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
		6.1.3 Level of management and/or protection of areas where culturally important practices and activities (hunting, fishing, gathering, trapping) occur	100 percent of forest operations in conformance with operational/site plans developed to address aboriginal forest values, knowledge and uses (variance of 0 percent)	Cultural Heritage Resources	N/A	N/A	N/A
	6.2 Respect for aboriginal forest values, knowledge and uses	6.2.1 Evidence of understanding and use of Aboriginal knowledge through the engagement of willing Aboriginal communities, using a process that identifies and manages culturally important resources and values	100 percent of identified aboriginal forest values, knowledge and uses considered in the forestry planning process (variance of 0 percent)	Cultural Heritage Resources	N/A	N/A	N/A
	6.3 Forest community well being and resilience	6.3.1 Evidence that the organization has cooperated with other forest-dependant businesses, forest users and local community to strengthen and diversify the local economy	Report out the number of purchase/sale/trade relationships with local forest dependant businesses where primary forest products and by products are involved (no variance)	N/A	N/A	N/A	N/A

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
		6.3.2 Evidence of cooperation with DFA-Related workers to improve and enhance safety standards, procedures and outcomes in all DFA-related workplaces and affected communities	100 percent of Participants and their contractors and licensees will implement and maintain a certified safety program (variance of 10 percent)	N/A	N/A	N/A	N/A
		6.3.3 Evidence that a worker safety program has been implemented and is periodically reviewed and improved	A) 100 percent of non-conformities identified by external audits will have an action plan developed and implemented in a manner and timeframe acceptable to the auditor (variance of 0 percent)	N/A	N/A	N/A	N/A
			B) Annual management review of the safety program will be completed (variance of 0)	N/A	N/A	N/A	N/A
	6.4 Fair and effective decision making	6.4.1 Level of Participant satisfaction with the public participation process	80% or greater level of satisfaction indicated by PRISM established and maintained satisfaction surveys (10 percent variance)	N/A	N/A	N/A	N/A
		6.4.2 Evidence of efforts to promote capacity development and meaningful participation in general	1 or more educational opportunities for information/training delivered to the PAG	N/A	N/A	N/A	N/A

Criteria and Element to FRPA Matrix

Criteria	Element	Indicator	Target	FPPR Section 4 Practice Requirements			
				Objective	Section	Subject	Practice Requirement
		6.4.3 Evidence of efforts to promote capacity development and meaningful participation in Aboriginal communities	See indicator 6.1.2	N/A	N/A	N/A	N/A
	6.5 Information for decision making	6.5.1 Number of people reached through educational outreach	50 or greater people to whom educational opportunities have been provided by the participants or their representatives	N/A	N/A	N/A	N/A
		6.5.2 Availability of summary information on issues of concern to the public	Previous years annual report must be made available to the public via the web prior to March 31st of the current reporting year (variance of 0)	N/A	N/A	N/A	N/A

Appendix 3.2: Glossary and Acronym List

Fort Nelson Sustainable Forest Management Plan PRISM Group

Glossary

From CSA definitions, Ministry of Forests “Glossary of Forestry Terms” website, and miscellaneous sources

1 Glossary

Annual Allowable Cut (AAC): The allowable rate of timber harvest from a specified area of land. The Chief Forester sets specific AACs for Timber Supply Areas and Tree Farm Licences in accordance with Section 8 of the *Forest Act*.

Biogeoclimatic Ecosystem Classification (BEC): A hierarchical system of ecosystems that integrates regional, local and chronological factors and combines climatic, vegetation and site factors.

Biological richness (species richness): The number of species in a given area.

Coarse woody debris (CWD): Downed woody material of a minimum diameter or greater that is resting on the forest floor or at an angle to the ground of 45 degrees or less. CWD consists of sound and rotting logs and branches, and may include stumps when specified. Coarse woody debris provides habitat for plants, animals and insects, and a source of nutrients for soil development.

Customary use rights: The rights of First Nations peoples to use lands and resources based on culturally established patterns of utilisation and management which may include fishing; hunting; trapping; gathering of foods, medicines and materials for ceremonial, spiritual, sustenance, or fabrication (e.g. clothing, artwork, building, etc.) purposes.

Defined Forest Area (DFA): A specified area of forest, including land and water. The Defined Forest Area for the Sustainable Forest Management Plan is the Fort Nelson Forest District, excluding private land and woodlots.

Edge habitat: Habitat conditions—such as degree of humidity and exposure to light or wind—created at or near the boundary dividing ecosystems, such as between open areas and adjacent forest.

Environmentally Sensitive Area (ESA): An area requiring special management attention to protect important scenic values, fish and wildlife resources, historical and cultural values, or other natural systems or processes.

Forest and Range Practices Act (FRPA): The *Forest and Range Practices Act* brings in the application of a results-based system for the management of forest and range resources. It will fully replace the *Forest Practices Code of British Columbia Act* by December, 2005.

General Development Permit (GDP): permit obtained by oil and gas sector to authorize limited development of an area in preparation for exploration activities for oil and gas.

Global ecological cycles: The complex of self-regulating processes responsible for recycling the Earth's limited supplies of water, carbon, nitrogen and other life-sustaining elements.

Inoperable: Lands that are unsuited for timber production now and in the foreseeable future because of a range of factors, including elevation; topography; inaccessible location; low value of timber; small size of timber stands; steep or unstable soils; or designation as parks, wilderness areas, or other uses incompatible with timber production.

Interior forest: Forest that is far enough away from a natural or harvested edge that the edge does not influence its environmental conditions, such as light intensity, temperature, wind, relative humidity, and snow accumulation and melt.

Landscape Unit: a planning area, generally up to about 100,000 ha in size, delineated according to topographic or geographic features such as a watershed or series of watersheds. It is established by the district manager.

Mean annual increment: is the average annual increase in volume growth, per year, expressed in cubic meters (m³) of individual trees.

Natural disturbance: the historic process of fire, insects, wind, landslides and other natural events in an area.

Non Commercial brush (NCBR): Describes potential productive forest land that is covered with either 'Forest' or 'Brush'.

Natural Disturbance Unit (NDU): These units separate areas based on differences in disturbance processes, stand development, and temporal and spatial landscape pattern.

NHLB: Non-Harvestable Land Base This is area not considered part of the THLB. This includes areas excluded from contributing to timber supply during the TSR process, such as parks, riparian reserve areas, inaccessible areas, inoperable areas, non-merchantable forest types, low productivity types, recreation features, and environmentally sensitive areas.

Opportunity THLB: Currently inoperable forests in the THLB that may become operable in the future due to current factors that may be mitigated, such as developed access or a minimum tree diameter to improve economic feasibility to harvest.

Patch: A particular unit with identifiable boundaries with different vegetation from its surroundings.

Predictive Ecosystem Mapping (PEM): A computer, GIS and knowledge-based method that divides landscapes into ecologically-oriented map units for management purposes.

Productive capability: The current and future ability of forest ecosystems to produce biomass.

Recreation Opportunity Spectrum (ROS): a mix of outdoor settings based on remoteness, area size, and evidence of humans, which allows for a variety of recreation activities and experiences. The descriptions used to classify the settings are on a continuum and are described as: rural, roaded resource, semi-primitive motorized, semi-primitive non- motorized, and primitive.

Recreation Opportunity Spectrum Classes

The MoF recreation inventory identifies and defines six ROS classes (note, however, that the Urban class is largely not used by the Ministry because it generally doesn't need to manage these areas) as follows:

Primitive

- very high probability of experiencing solitude, closeness to nature, self-reliance and challenge
- unmodified natural environment
- generally greater than 8 km from a 4-wheel-drive road
- very low interaction with other people
- little on-the-ground evidence of other people
- restrictions and controls generally not evident Final Glossary December 9, 2004 3
- non-motorized access and travel on trails, cross country and waterways
- generally no facilities except where required for safety and sanitation
- generally no site modification

Semi-primitive, Non-motorized

- high probability of experiencing solitude, closeness to nature, self-reliance and challenge
- natural or natural-appearing environment
- generally greater than 1 km from a 4-wheel-drive road
- low interaction with other people
- some on the ground evidence of other people
- some on-site controls may be evident
- non-motorized access and travel on trails, cross country and waterways
- facilities may be present for signing and for sanitary and safety needs using natural, rustic materials
- minimal to no site modification

Semi-primitive, Motorized

- moderate opportunity for solitude, closeness to nature; high degree of self-reliance and challenge in using motorized equipment
- natural or natural-appearing environment
- generally greater than 1 km from a 2-wheel-drive road
- low interaction with other people
- some on-the-ground evidence of other people
- some on-site controls may be evident
- motorized access on trails, primitive roads and cross country may occur
- limited facilities for signing, sanitary and safety needs, using natural, rustic materials wherever possible
- minimal site modification

Roaded Resource Land

- opportunities for both privacy and social interaction; feelings of independence and freedom
- natural environment may be substantially modified
- often within 1 km of a 2-wheel-drive road with a gravel or dirt surface
- moderate interaction with other people
- on-the-ground evidence of other people
- some on-site controls present
- access and travel is by motorized vehicle

- facilities generally present; natural, rustic materials preferred with more refinement in design
- moderate site modification

Rural

- opportunities for social interaction and convenient facilities
- natural environment is culturally modified, e.g., pastoral farmlands and utility corridors
- many interactions with other people
- obvious on-the-ground evidence of other people
- on-site controls are prevalent and obvious
- access and travel is by conventional motorized vehicle
- complex and numerous facilities
- moderate to heavy site modification

Regeneration delay: the maximum time allowed in a prescription, between the start of harvesting in the area to which the prescription applies, and the earliest date by which the prescription requires a minimum number of acceptable well-spaced trees per hectare to be growing in that area.

Riparian: Area adjacent to a stream, river, lake or wetland. The FPC Riparian Management Area Guidebook defines it as "areas [that] occur next to the banks of streams, lakes, and wetlands and include both the area dominated by continuous high moisture content and the adjacent upland vegetation that exerts an influence on it".

Riparian Reserve Zone (RRZ): The portion of the riparian management area or lakeshore management area located adjacent to a stream, wetland or lake.

Seral: the stage of development of an ecosystem, from a disturbed, un-vegetated state (early-seral) to a mature plant community (late-seral).

Site Index: an expression of the forest site quality of a stand, at a specified age, based either on the site height, or on the top height, which is a more objective measure.

Snag: a standing dead tree, or part of a dead tree, found in various stages of decay—from recently dead to very decomposed.

Stream Crossing Quality Index: a field based hazard assessment of the potential for accelerated erosion and sediment delivery at stream crossings. The procedure evaluates and scores the potential for eroded sediment to reach the stream environment. A high score infers that there is a significant erosion problem which may in turn cause sediment related water quality problems.

Sustainable Forest Management (SFM): Management “to maintain and enhance the long-term health of forest ecosystems, while providing ecological, economic, social and cultural opportunities for the benefit of present and future generations”²

Timber Harvesting Landbase (THLB): The area of the Defined Forest Area available for timber extraction.

Traditional Use Study (TUS): Compilation of data respecting historic use of the land and resources by First Nations

Visual Quality Objective (VQO): A resource management objective established by the district manager or contained in a higher level plan that reflects the desired level of visual quality based on the physical characteristics and social concern for the area. Five categories of VQO are commonly used: preservation; retention; partial retention; modification; and, maximum modification.

2 Acronyms

Acronym	Definition
AAC	Annual Allowable Cut
AM	Adaptive Management
AU	Analysis Unit
BCTS	BC Timber Sales
BEC	Biogeoclimatic Ecosystem Classification
BEO	Biodiversity Emphasis Option
CAPP	Canadian Association of Petroleum Producers
Canfor	Canadian Forest Products Ltd.
CFS	Canadian Forest Service
CFLB	Crown Forested Land Base
CSA	Canadian Standards Association
CWD	Coarse Woody Debris
DBH	Diameter at Breast Height
DIB	Diameter Inside Bark
DFA	Defined Forest Area
DFAM	Defined Forest Area Management
DWB	Decay, Waste and Breakage
ECA	Equivalent Clearcut Area
EMS	Environmental Management System
ESA	Environmentally Sensitive Area
FDP	Forest Development Plan
FESL	Forest Ecosystem Solutions Ltd.
FCI	Forest Cover Inventory
FIA	Forest Investment Account
FIP	Forest Inventory Planning
FIZ	Forest Inventory Zone
FPC	Forest Practices Code
FSOS	Forest Simulation Optimization System
FSP	Forest Stewardship Plan
GIS	Geographic Information Systems
GMZ/GRZ	General Resource Zone
IFPA	Innovative Forest Practices Agreement
ILMB	Integrated Land Management Branch (defunct)
ISIS	Integrated Silviculture Information System
ISO	International Standards Organization
ITG	Inventory Type Group
KPMG	KPMG LLP. (Canada)
LRMP	Land Resources Management Plan
LU	Landscape Unit
LUPG	Landscape Unit Planning Guide
MAI	Mean Annual Increment
MARR	Ministry of Aboriginal Relations and Reconciliation
MCA	Multi-Criteria Analysis
MFML	Ministry of Forests, Mines and Lands
MFR	Ministry of Forests and Range (defunct)

Acronym	Definition
ME	Ministry of Energy
MEMPR	Ministry of Energy, Mines and Petroleum Resources (defunct)
MHA	Minimum Harvestable Age
MNRO	Ministry of Natural Resource Operations
MOA	Memorandum of Agreement
MOE	Ministry of Environment
MOF	Ministry of Forests (defunct)
MPS	Market Pricing System
MSRM	Ministry of Sustainable Resource Management (defunct)
MSYT	Managed Stand Yield Table
MWLAP	Ministry of Water, Land and Air Protection (defunct)
NDD	Natural Disturbance Database
NDT	Natural Disturbance Type
NDU	Natural Disturbance Unit
NHLB	Non Harvestable Land Base
NSOGO	Non-Spatial Old Growth Order
NSR	Not Satisfactorily Stocked
NSYT	Natural Stand Yield Table
NTFP	Non-Timber Forest Product
O&G	Oil and Gas
OAF	Operational Adjustment Factor
OGC	Oil and Gas Commission
OGSI	Old Growth Site Index
OSK	Oriented Stand Board
PAG	Public Advisory Group
PAS	Protected Area Strategy
PEM	Predictive Ecosystem Management
PRISM	Public Response for Informed Sustainable Management
PWC	Price Waterhouse Coopers
RMA	Riparian Management Area
RMZ	Riparian Management Zone
ROS	Recreational Opportunities Spectrum
RRZ	Riparian Reserve Zone
RVQC	Recommended Visual Quality Class
SCQA	Stream Crossing Quality Assessment
SI	Site Index
SI50	Site Index for age 50
SIBEC	Site Index Biogeoclimatic Ecological Classification
TBD	To Be Determined
THLB	Timber Harvesting Land Base
TIPSY	Table Interpolation Program for Stand Yields
TOR	Terms of Reference
TRIM	Timber Resource Inventory Model
TSA	Timber Supply Area
TSR	Timber Supple Review
UWH	Ungulate Winter Range
VAC	Visual Absorption Capacity
VDYP	Variable Density Yield Prediction

Acronym	Definition
VEG	Visually Effective Green-up
VRI	Vegetation Resource Inventory
VQO	Visual Quality Objective
WHA	Wildlife Habitat Area
WLAP	Ministry of Water, Land and Air Protection (defunct)
WTP	Wildlife Tree Patch
WTR	Wildlife Tree Retention
WQCR	Water Quality Concern Rating

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