Appendix VII.   SFM Matrix of Values, Goals,
                Indicators and Targets

SFM Matrix of Values, Objectives, Indicators and Targets

CCFM Criteria and CSA SFM Elements	Value	Objective	Indicator	Target	Acceptable Variance
Criterion 1. Conservation of Biological Diversity Conserve biological diversity by maintaining integrity, function and diversity of living organisms and the complexes of which they are apart.					
Element 1.1 Ecosystem Diversity Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur on the DFA.	1.1 A diverse landscape	1.1 (a) Manage forests to conserve ecosystem diversity.	1. Percent non-harvestable forest by ecosystem groups.	Report the percent non-harvestable forest by ecosystem groups every 5 years.	Not applicable.
			2. Percent forest interior in the non-harvestable forest by BEC variant within LUs.	Report the percent forest interior in the non-harvestable forest every 5 years.	Not applicable.
			3. Percent OGMA by BEC variant within LUs.	OGMAs are represented across the landscape according to the targets listed by BEC variant within LUs in Table 9.	-10% of the target for each BEC subzone and LU.
			4. Percent wildlife tree retention by BEC subzone within LUs.	Wildlife tree retention is represented across the landscape and over any 5-year period according to the targets listed by BEC subzone within LUs in Table10.	Not acceptable.
			5. Percent internal patch retention by LU, EMU and BEC subzone.	Internal patches are represented across the landscape and over any 5-year period according to the targets listed by LU, EMU, and BEC subzone in Table 11.	-10% of the target for each LU, EMU, and BEC subzone.
			6. Number of single trees per hectare retained by EMU.	Single trees retained are represented across the landscape and over any 5-year period according to the targets listed by EMU in Table 13.	-10% of the minimum target for each EMU.
			7. Percent forest influence by EMU.	Forest influence is represented across the landscape and over any 5-year period according to the targets listed by EMU in Table 14	As shown for each EMU in Table 14.
Element 1.2 Species Diversity Conserve species diversity by ensuring that habitats for the native species found on the DFA are maintained through time.	1.2 Native species diversity.	1.2 (a) Diversity of habitats to sustain a natural diversity of native species.	8. Area conserved for potential black bear denning habitat.	At least 11,000 ha are conserved as potential black bear denning habitat.	-5% of the target.
			9. Area conserved for black-tailed deer and Roosevelt elk critical winter range.	At least 6,000 ha are conserved as ungulate winter range.	-3% of the target.
			10. Percent consistency with management practices to address special habitat features.	Where worker safety is not compromised, all cutblocks felled over any 5-year period are managed to address special habitat features identified.	Not acceptable.
		1.2 (b) Maintain habitat for Species at Risk.	11. Area conserved for Queen Charlotte goshawk.	At least 2,000 ha are conserved for Queen Charlotte goshawk nesting and post-fledgling areas.	-5% of the target.
			12. Area conserved for Keen's Long-eared Bat hibernacula and maternity sites.	At least 200 ha are conserved for Keen's Long-eared Bat hibernacula and maternity sites.	-10% of the target.
			13. Area conserved for Marbled Murrelet nesting habitat.	At least 14,000 ha are conserved for Marbled Murrelet nesting habitat.	-3% of the target.
		1.2 (c) Maintain native tree species diversity at the landscape level.	14. Percent of forest area surveyed as acceptable free growing stands and proportion that indicates more than one suitable native tree species.	Over a 5-year period, at least 95% of the forest area surveyed are acceptable free growing stands while all inventory labels for these stands indicate more than one suitable native tree species.	-5% of the target.
		1.2 (d) Minimize potential negative effects of resource development on aquatic habitat.	15. Number of medium to high significant non-compliances/ non-conformances with riparian management impacts.	No high significant non-compliances/ non-conformances with riparian management impacts.	To be determined following several years of results.
Element 1.3 Genetic Diversity Conserve genetic diversity by maintaining the variation of genes within species.	1.3 Genetic diversity	1.3 (a) Conserve genetic diversity across the Nimpkish DFA.	Ecosystems in the non-harvestable landbase (see indicator 1).		
			Old growth management areas (See indicator 3)		
			16. Percent of trees planted from MoF registered seed.	All seed and seed sources used for reforestation over any 5-year period is MoF registered.	Not acceptable.

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CCFM Criteria and CSA SFM Elements	Value		Objective		Indicator	Target	Acceptable Variance
Element 1.4 Protected Areas and Sites of Special biological Significance Respect protected areas identified through government processes. Identify sites of special biological significance within the DFA and implement management strategies appropriate to their long term maintenance.	1.4	Protected Areas and Sites of Special Biological Significance.	1.4 (a)	Conserve Protected Areas and Sites of Special Biological Significance.	17. Percent consistency with established objectives to address WHAs, OGMAs, UWRs and PAs.	All cutblocks felled over any 5-year period are consistent with established objectives to address WHAs, OGMAs, UWRs and PAs.	Not acceptable.
					18. Percent consistency with management practices to address rare plants and plant associations.	All cutblocks felled over any 5-year period are consistent with management practices to address rare plants and plant associations.	-5% of the target.
Criterion 2. Maintenance and Enhancement of Forest Ecosystem Condition and Productivity Conserve forest ecosystem condition and productivity by maintaining the health, vitality, and rates of biological production.							
Element 2.1 Forest Ecosystem Resilience Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.	2.1	A resilient forest ecosystem	2.1 (a)	Maintain natural range of variability in ecosystem function, composition and structure, which allows ecosystems to recover from disturbance and stress.	Ecosystems in the non-harvestable landbase (see indicator 1).		
			2.1 (b)	Minimize forest regeneration failure.	Forest regeneration (see indicator 31).		
					Free-Growing Stand Establishment (see indicator 14)		
	2.2	A healthy forest	2.2 (a)	Minimize the impact on forest resources due to uncontrolled forest disease.	19. Percent consistency with management practices to address forest disease.	All cutblocks felled over any 5-year period are consistent with management practices to address forest disease.	-5% of the target.
			2.2 (b)	Minimize the impact on forest resources resulting from uncontrolled fire.	20. Percent consistency with time to control a forest fire.	All forest fires observed over any 5-year period are extinguished or under control by 10:00 a.m. the day after the fire started.	-10% of the target.
			2.2 (c)	Maintain Ecosystem diversity.	Ecosystems in the non-harvestable landbase (see indicator 1).		
					Forest interior in the non-harvestable landbase (see indicator 2).		
					Old growth management areas (see indicator 3).		
					Wildlife tree retention (see indicator 4).		
					Internal patch retention (see indicator 5).		
					Single Tree Retention (see indicator 6).		
					Forest Influence (see indicator 7).		
Element 2.2 Forest Ecosystem Productivity Conserve ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species.	2.3	A productive forest ecosystem	2.3 (a)	Maintain the productivity of forest ecosystems.	Soil disturbance (see indicator 25)		
					Forest regeneration (see indicator 31)		
					Free-growing stand establishment (see indicator 14)		
					21. Percent of the harvested area that is converted to unproductive sites for road development.	Up to 3.9% of the harvest area over any 5-year period is converted for road development.	+10% of the target.
					22. Average site index of identified trees within change monitoring inventory plots.	Report the average site index of identified trees within change monitoring inventory plots.	Not required.
			2.3 (b)	Minimize the impact on forest resources resulting from uncontrolled fire, insect outbreak, windthrow or flooding losses.	23. Percent consistency with annual targets set in the Damaged Timber Plan.	All cutblocks felled over any 5-year period are consistent with annual targets set in the Damaged Timber Plan.	-5% of the target.

CCFM Criteria and CSA SFM Elements	Value	Objective	Indicator	Target	Acceptable Variance
Criterion 3. Conservation of Soil and Water Resources Conserve soil and water resources by maintaining their quantity and quality in forest ecosystems.					
Element 3.1 Soil Quality and Quantity Conserve soil resources by maintaining soil quality and quantity.	3.1 Soil quality and quantity.	3.1 (a) Manage soil resources to sustain productive forests.	Road development (see indicator 21).		
			24. Area converted to non-productive forest land resulting from landslides that are induced by forest development activities.	No area is converted to permanent non-productive area, resulting from landslides observed over any 5-year period that are induced by forest development activities.	+10 hectares to the target.
			25. Percent consistency with management practices to address soil disturbance.	All cutblocks felled over any 5-year period are consistent with management practices to address soil disturbance.	-5% of the target.
Element 3.2 Water Quality and Quantity Conserve water resources by maintaining water quality and quantity.	3.2 Naturally clean and clear water	3.2 (a) Minimize the effects that Canfor's activities have on water quality.	26. Number of medium to high significant non-compliances/ non-conformances with water quality impacts.	No high significant non-compliances/ non-conformances with water quality impacts.	To be determined following several years of results.
	3.3 Natural water quantities	3.3 (a) Manage the impacts on natural seasonal flows.	27. Percent of watershed areas assessed with a high hydrologic condition index.	Report watershed areas according to their hydrologic condition index.	To be derived as appropriate targets are developed.
Criterion 4. Forest Ecosystem Contributions to Global Ecological Cycles Maintain forest conditions and management activities that contribute to the health of global ecological cycles.					
Element 4.1 Carbon uptake and storage Maintain the processes that take carbon from the atmosphere and store it in the forest ecosystem.	4.1 Natural carbon cycle	4.1 (a) Maintain the processes for carbon uptake and storage.	28. Amount of carbon stored in the forested ecosystem by carbon pool (mega tonnes of carbon).	Report the carbon stored in the forested ecosystem by pool every 10 years.	To be derived as appropriate targets are developed.
			29. Average carbon sequestration rate in the forested ecosystem by carbon pool (mega tonnes of carbon per year)	Report the average carbon sequestration rate in the forested ecosystem by carbon pool every 10 years.	To be derived as appropriate targets are developed.
Element 4.2 Forest Land Conversion Protect forestlands from deforestation or conversion to non-forests.	4.2 Protection of the forest landbase	4.2 (a) Maintain the forest landbase.	Road development (see indicator 21).		
		4.2 (b) Minimize impacts to the timber harvesting landbase of other forest developers where possible.	30. Documented communications with other forest developers that potentially impact the THLB.	Stress the minimization of losses in all referrals that have the potential to remove land from the THLB.	Not acceptable.
		4.2 (c) Ensure that forests are regenerated on harvested and disturbed sites.	31. Percent of disturbed areas with reforestation obligations that are satisfactorily regenerated.	Over a 5-year period, all disturbed areas with reforestation obligations are satisfactorily regenerated.	-5% of the target.

CCFM Criteria and CSA SFM Elements	Value		Objective	Indicator	Target	Acceptable Variance
Criterion 5. Multiple Benefits to Society						
Sustain flows of forest benefits for current and future generations by providing multiple goods and services.						
Element 5.1 Timber and Non-Timber Benefits Manage the forest to produce an acceptable and feasible mix of both timber and non-timber benefits.	5.1	Sustainable supply of timber	5.1 (a) Maintain a diverse and sustainable supply of timber.	32. Total volume harvested relative to the AAC authorized over the cut control period.	The volume harvested does not exceed the total AAC authorized for the cut control period.	+10% to the target.
				33. Harvest profile by area for: economic operability, logging type, tree species, and stand type.	The area harvested does not exceed the key profile targets listed in Table 36 for the cut control period.	As shown for each key profile in Table 36.
	5.2	Multiple benefits from the forest	5.2 (a) Provide opportunities for outdoor recreation.	34. Number of maintained recreation sites.	At least eight campsites are maintained between June 15 and September 15 each year.	-1 campsite.
			5.2 (b) Minimize negative impacts on karst.	35. Percent consistency with management practices to address karst features.	All cutblocks felled over any 5-year period are consistent with management practices to address karst features.	-5% of the target.
				36. Number of documented visits to known caves.	Report the number of documented visits to known caves.	Not required.
			5.2 (c) Provide opportunities for guiding, trapping, hunting and wildlife viewing.	Old growth management areas (see indicator 3).		
				Black Bear Critical Habitat (see indicator 8).		
				Ungulate Winter Range (see indicator 9).		
			5.2 (d) Minimize negative effects of resource development on riparian zones.	Riparian management (see indicator 15).		
			5.2 (e) Maintain native botanical forest species.	Ecosystems in the non-harvestable landbase (see indicator 1).		
				37. Amount and value of non-timber botanical forest products.	Report non-timber botanical forest products harvested and their approximate economic impact.	Not required.
			5.2 (f) Maintain visual quality in known scenic areas.	38. Percent consistency with management practices to address visual quality.	All cutblocks felled over any 5-year period are consistent with management practices to address visual quality.	-5% of the target.
Element 5.2 Communities and Sustainability Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.	5.3	Stability in North Island communities supported by the Nimpkish DFA.	5.3 (a) Coastal Operations contribute towards Canfor's overall a globally competitiveness.	39. Return on capital employed.	Report the annual and five-year weighted return on capital employed.	Not required.
			5.3 (b) Provide local access to raw material at fair market price.	40. Volume of logs sold or made available for local purchase at fair market price.	Over a 5-year period, at least 50,000m³/yr of logs will be sold or made available for local purchase at fair market price by community.	-20% of the target.
			5.3 (c) Contribute to the diversified economic base of local communities.	41. Number and approximate annual revenue of non-forestry businesses associated with the Nimpkish DFA.	Report the number and approximate annual revenue of non-forestry businesses associated with the Nimpkish DFA.	Not required.
				42. Number of Canfor and contractor employees from local communities.	Report the number of full time Canfor and contractor employees by community.	Not required.
				43. Value of donations and descriptions of in-kind contributions.	Report the value of donations and descriptions of in-kind contributions annually.	Not required.
Element 5.3 Fair Distribution of Benefits and Costs Promote the fair distribution of timber and non-timber benefits and costs.	5.4	Fair distribution of timber and non-timber benefits and costs over time.	5.4 (a) Provide fair opportunities for a range of interests to access benefits on the Nimpkish DFA	44. Volume of timber harvested by contractors relative to the total annual timber volume harvested.	Contractors will harvest at least 50% of the total annual timber volume harvested.	Not acceptable.

1   Tables within SFM Plan 9

CCFM Criteria and CSA SFM Elements	Value		Objective		Indicator	Target	Acceptable Variance
Criterion 6. Accepting Society's Responsibility for Sustainable Development Society's responsibility for sustainable forest management requires that fair, equitable, and effective forest management decisions are made.							
Element 6.1 Aboriginal and Treaty Rights Recognize and respect Aboriginal and treaty rights.	6.1	Aboriginal and Treaty Rights	6.1 (a)	Coordinate and manage activities to avoid infringement of aboriginal rights.	45. Documented opportunities provided to local First Nations for review of operational plans.	All operational plans are accessible for review by local First Nations.	None.
					46. First Nations participation on the NWAC.	The three local First Nations' are afforded every opportunity to participate in the NWAC.	Not acceptable.
Element 6.2 Respect for Aboriginal Forest Values, Knowledge and Uses Respect traditional Aboriginal forest values and uses identified through the Aboriginal input process.	6.2	Interests of Aboriginal People	6.2 (a)	Actively investigate and plan for the management of cultural features and values.	47. Percent consistency with management practices to address cultural features.	All cutblocks felled over any 5-year period are consistent with management practices to address cultural features.	-5% of the target.
			6.2 (b)	Strengthen relationships between Canfor and Aboriginal people.	First Nations Participation on the NWAC (see indicator 46).		
					48. Number of First Nations working for Canfor and contractors.	Report by company, the number of First Nations working for Canfor and contractors annually.	Not required.
					49. Number and description of protocol, joint venture, and/or impacts and benefit agreements signed with First Nations.	Report annually the number and description of protocol, joint venture, and/or impacts and benefit agreements signed with First Nations.	Not required.
					50. Value and description of contracts annually awarded to First Nations or firms associated with First Nations' interests.	Report the value and description of contracts annually awarded to First Nations or firms associated with First Nations' interests.	Not required.
Element 6.3 Public Participation Demonstrate that the public participation process is designed and functioning to the satisfaction of the participants.	6.3	Incorporation of social values in the forest management process.	6.3 (a)	Provide a successful venue for public participation.	51. Number of interest groups represented on the NWAC.	Representatives from 13 interest groups will participate on the NWAC.	-3 from the target.
					52. Number of meetings per year.	Organize at least two NWAC meetings per year.	Not acceptable.
					53. NWAC members are provided an opportunity to express their satisfaction with the process.	Conduct an annual review of the NWAC Terms of Reference.	Not acceptable.
Element 6.4 Information for Decision-Making Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.	6.4	Informed and inclusive decision making.	6.4 (a)	Provide relevant information to NWAC in a timely manner.	54. NWAC members are prepared for meetings by having background information in advance of meetings.	Provide background material for review, if required, at least two weeks in advance of meetings.	Not acceptable.
	6.5	Enhanced decision making processes	6.5 (a)	Increase Canfor's understanding of forest ecosystems and resource values.	55. Number of forest based research, inventory or monitoring projects.	Conduct at least three active research, inventory or monitoring projects per year designed to improve Canfor's knowledge base.	Not acceptable.

1   Tables within SFM Plan 9