

**CCFM Criterion 1 - Biological Diversity**

Objective	Indicator	Target	Means to Identify Target	Legal/Policy Requirements	Means of Achieving Objective and Target	Monitoring and Measurement	Reporting	Acceptable Variance	Response												
<b>CSA SFM Element - 1.1 Ecosystem Diversity</b>		Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that occur naturally in the FMA.																			
Value - 1.1.1 Landscape scale biodiversity.																					
1.1.1.1 Maintain biodiversity by retaining the full range of covertypes and seral stages (1).	Area of old, mature, and regenerating forest in each FMU by broad cover class.	At 10 years, gross and active landbase area greater than values indicated for old and mature plus old forest and less than values indicated for regenerating forest. Old forest retention shall include the full natural range of ages.	Targets and seral stage definitions shall be based on sound science, ecological considerations, wildlife zones and disturbance regimes. Target shall ensure representation of natural range of ecosystem attributes (e.g. productivity class).	Planning Standard	Spatial Harvest Sequence	Regular updates to inventory.	<b>FMP:</b> Tables of indicators (values and targets) at 0, 10, 50, 100 and 200 years. Maps of indicators at 0, 10 and 50 years. <b>Performance:</b> Stewardship Report.	Area of old and mature forest in FMU by cover class shall be between 90% and 100% of target. Area of regenerating forest in FMA by broad cover class shall not exceed 110% of target area.	Adjust strategies in subsequent FMP.												
										D	MX	PL	SB	SW							
										Gross Landbase - FMU P6											
		Old								33,325	10,845	555	1,292	5,839							
		Old+Mature								74,343	18,489	3,343	30,802	25,421							
										Gross Landbase - FMU P9											
		Old								3,234	1,393	164	233	586							
		Old+Mature								102,729	9,498	6,585	6,294	5,243							
										Active Landbase - FMU P6											
		Old								30,593	10,228	435	75	4,760							
		Old+Mature								67,344	16,965	3,079	1,014	19,679							
		Regen								7,421	11,125	2,975	68	11,522							
										Active Landbase - FMU P9											
		Old								2,837	776	156	17	525							
		Old+Mature								77,779	6,094	6,271	70	4,192							
Regen	0	24	0	0	0																
1.1.1.2 Maintain biodiversity by avoiding landscape fragmentation.	A) Range of patch (2) sizes by FMU and for the FMA.	A distribution of harvest area sizes that, at year 10, are consistent with attaining a patch size pattern over the 200 year planning horizon that approximates patterns created by natural disturbances.	Targets shall be based on sound science, ecological considerations, wildlife zones and disturbance regimes. Target shall ensure representation of natural range of ecosystem attributes (e.g. cover class and productivity class).	Planning Standard	Spatial and temporal harvest planning. Patch size distribution targets are set for forest patches less than 20 years old.	Regular updates to forest inventory.	<b>FMP:</b> Tables of area of forest in each patch size class by FMU at 0, 10 and 50 years. Maps of patch size classes at 0, 10 and 50 years. <b>Performance:</b> Stewardship report.	At the end of the 10-year FMP term the target distribution is achieved; or demonstrated progress to achieving target where the pattern has deviated significantly from the target.	Adjust strategies in subsequent FMP.												
										P6	P9	FMA									
		0-7								1,870	12	1,882									
		8-200								10,055	11	10,066									
		61-200								15,728	0	15,728									
	201+	7,837								0	7,837										
	B) Area of old interior forest (3) of each cover class by FMU and for the FMA.	At 10 years, area of old interior forest will not be less than values indicated.								Targets shall be based on sound science, ecological considerations, wildlife zones and disturbance regimes. Target shall ensure representation of natural range of ecosystem attributes (e.g. productivity class).	Planning Standard	Spatial and temporal harvest planning	Regular updates to forest inventory.	<b>FMP:</b> Tables of area of forest in each patch size class by FMU at 0, 10 and 50 years. Maps of patch size classes at 0, 10 and 50 years. <b>Performance:</b> Stewardship report.	At the end of the 10 year FMP term, variance not exceeding 20% below target.	Adjust strategies in subsequent FMP.					
																	D	MX	PL	SB	SW
		FMU P6															15,157	7,507	1,130	16,646	12,420
		FMU P9															684	873	0	1,721	1,762
FMA		15,841	8,379	1,130	18,367	14,182															
1.1.1.3 Maintain biodiversity by minimizing access	A) Open all-weather forestry road density by FMU.	A) MDFFP does not currently have any all-weather forestry roads. Density will be less than 0.017 km/km <sup>2</sup> within each FMU.	Targets shall be based on sound science, ecological considerations, harvest planning, wildlife zones and social values.	Planning Standard	Develop a strategy that coordinates access with other resource users, spatial/temporal sequencing of harvest, road closures and decommissioning. (SHS and long-term corridor access plan)	Land use systems and regular updates to inventory and land use systems	<b>FMP:</b> Table of road density by FMU at 0 and 10 years. Map of existing and proposed open and closed all-weather roads. Report forestry roads and total (all users) roads. <b>Performance:</b> Stewardship Report	A variance not exceeding ±20% must be achieved	Adjust strategies in subsequent FMP												

	B) Open seasonal/temporary forestry road length for FMA.	B) Less than 350 km within the FMA.	Targets shall be based on sound science, ecological considerations, harvest planning, wildlife zones and social values.	Planning Standard	Road construction, maintenance and reclamation activities	Road Plan OGR 11.2	AOP and Stewardship Report	A variance not exceeding ±20% must be achieved	Adjust strategies in subsequent AOPs
1.1.1.4 Maintain plant communities uncommon in FMA or province.	Area of occurrence of each uncommon plant community within FMA	Percentage of identified communities will be maintained as indicated. Percentage will be reviewed with ANHIC as communities are identified. CEAB000043 - Populus balsamifera / Viburnum opulus / Matteuccia struthiopteris - 100% CEAB000044 - Populus tremuloides / Rubus parviflorus / Aralia nudicaulis - 100%	GIS analysis, AVI, ecosite phases, Alberta Natural Heritage Information Centre (ANHIC) plant community classification and tracking list. Predict and identify occurrence of uncommon plant community	Planning Standard	Coordinating with other resource users, spatial planning of harvest and road construction, OGR	Regular updates to inventory.	<b>FMP:</b> Table with descriptive list and targets. Map(s) displaying known locations of uncommon plant communities. <b>Performance:</b> Stewardship Report	At the end of the 10-year FMP term the target is achieved.	Adjust strategies in subsequent AOPs
1.1.1.5. Maintain unique habitats provided by wildfire and blowdown events.	A) Area of unsalvaged burned forest	<b>Live trees:</b> Retain all unburned trees in green islands and retained patches, recognizing timber condition, access, non-timber needs. <b>Burned trees - Compartment scale:</b> Retain greater than 10% of merchantable black trees in patches greater than 100 ha. <b>Burned trees - Harvest area scale:</b> Retain greater than 10% of merchantable black trees in patches 10-100 ha. Retain greater than 5% of merchantable black trees in small patches, single trees according to loggers choice.	Targets based on "Fire Salvage Strategy: Forest Management Planning and Operations 2002". Ensure consistency with FireSmart objectives.	Fire Salvage Strategy: Forest Management Planning and Operations 2002 (Forest Operations Branch, Alberta)	Salvage planning	Organization reports, air photo interpretation, ground surveys, post harvest assessments	<b>FMP:</b> Table and map of natural disturbances within the last 10 years -salvaged and unsalvaged. Report area. <b>Performance:</b> Stewardship Report	At the end of the 10-year FMP term the target is achieved or exceeded.	Adjust strategies in subsequent AOPs
	B) Area of unsalvaged blowdown	In areas of significant blowdown greater than 10% will be left unsalvaged.	Targets are to be based on sound science, ecological considerations and disturbance regimes.	Planning Standard	Salvage planning	Inventory updates	<b>Performance:</b> Stewardship Report	At the end of the 10-year FMP term the target is achieved or exceeded.	Adjust strategies in subsequent AOPs
1.1.1.6. Retain ecological values and functions associated with riparian zones	Compliance with OGR.	Consistent with OGR	OGR	Federal Fisheries Act, Water Act	Planning, TSA, OGR	Organization reports, air photo interpretation, ground surveys, post harvest assessments or other existing compliance monitoring systems	<b>Performance:</b> Stewardship Report	No variance	Immediate remedial action and/or administrative penalty
<b>Value - 1.1.2 Local/stand scale biodiversity.</b>									
1.1.2.1. Retain stand level structure	A) Percentage of area with residual structure (both living and dead), within a harvest area, representative of the status (live/dead), sizes, and species of the overstory trees by FMU and FMA.	A) A combination of single stems, clumps, and islands comprising 6% of the harvested area within FMUs. (Note: A wide range in variability in harvest area-level retention within an FMU is desired as long as the target level is achieved.)	Wildlife zones, roadside vegetation screens, recreational values, aesthetics, local knowledge, ANHIC, Biodiversity/Species Observation Database (BSOD).	Occupational Health and Safety Act, Forest and Prairie Protection Act	Implement residual Structure Retention Strategy and OGRs	Organization reports, air photo interpretation, ground surveys, post harvest assessments	<b>Performance:</b> Stewardship Report	At the end of the 10-year FMP term the target is achieved or exceeded.	Adjust strategies in subsequent FMP.

	B) Percentage of harvested area, by compartment, with downed woody debris (4) equivalent to preharvest conditions.	B) 50% of harvest areas have downed woody debris equivalent to preharvest conditions, retained on site. Average downed woody debris in post-harvest blocks will be equivalent to preharvest average downed woody debris.	Assess preharvest downed woody debris condition by compartment.	Planning Standard	Organization developed standards.	Organization developed during FMP planning	<b>Performance:</b> Report average downed woody debris for all harvest areas (5 years) in Stewardship report.	A variance not exceeding 10% must be achieved, based on 5 year results.	Adjust strategies in subsequent FMP.
1.1.2.2. Maintain integrity of sensitive sites	Sensitive sites (e.g. mineral licks, major game trails) by FMU and FMA.	Implement Unique Finds Policy, which is consistent with provincial guidelines/OGRs, to identify and maintain sensitive sites.	Local knowledge, ANHIC, Biodiversity/Species Observation Database (BSOD)	Planning Standard	Organization developed standards for sensitive site protection, OGRs 7.7.4	Organization reports, air photo interpretation, ground surveys	<b>Performance:</b> Stewardship Report	None	Adjust strategies in subsequent AOPs
1.1.2.3. Maintain aquatic biodiversity by minimizing impacts of water crossings	Forestry water crossings within each FMU are in compliance with Code of Practice for Water Course Crossings.	Designs meet standards of the Code of Practice for Water Course Crossings	Code of Practice for Water Course Crossings: Sections 7-9 and Schedule 2	Code of Practice for Water Course Crossings	Road construction, maintenance and reclamation activities	Road plan OGR 11.2	<b>Performance:</b> AOPs summarize number of crossings by type within each FMU by compliance status.	None	Act immediately to eliminate problems and adjust strategies in subsequent AOPs
<b>CSA SFM Element - 1.2 Species Diversity</b>		Conserve species diversity by ensuring that habitats for the native species found in the FMA are maintained throughout time.							
<b>Value - 1.2.1. Viable populations of identified plant and animal species.</b>									
1.2.1.1. Maintain habitat for identified high value species (i.e., economically valuable, socially valuable, species at risk, species of management concern).	A) Area of suitable woodland caribou habitat.	A1) TSA and SHS incorporates caribou habitat strategy within the Caribou Zone.	Based on sound science, ecological considerations, wildlife zones, Committee on the Status of Endangered Wildlife in Canada (COSEWIC) list, provincially listed species, BSOD, ANHIC, Recovery plans, Fish and Wildlife Division priorities, public consultation, habitat suitability analysis, literature review, observation data, local and traditional knowledge.	Recovery plans for species at risk, Federal Species at Risk Act	Spatial Harvest Sequence, harvesting plans, road construction, OGR, planning and implementation, adherence to provincial wildlife guidelines	Regular updates to forest inventory, habitat assessment mapping	<b>FMP:</b> For species with a suitable habitat target provide tables of area of suitable habitat at 0, 10, 50, 100, and 200 years. Map of suitable habitat at 0, 10, and 50 years. <b>Performance:</b> Stewardship Report	At the end of the 10-year FMP term the target is achieved or exceeded.	Adjust strategies in subsequent FMP
	B) Area of suitable grizzly bear habitat.	B) Continue support of Foothills Model Forest Grizzly Bear Program and its habitat mapping efforts.	Based on sound science, ecological considerations, Recovery plans, Fish and Wildlife Division priorities, habitat suitability analysis, literature review, observation data.	FMP	Financial or in-kind support.	FMF communications	<b>Performance:</b> Support noted in Stewardship Report	Support conditional on FMF program progress.	None
	C) Existing habitat for trumpeter swan.	C) Maintain a 200 m buffer around all lakes with trumpeter swan nesting sites.	ANHIC	FMP, OGR	Spatial harvest sequence	Regular updates to inventory.	<b>FMP:</b> Swan nesting lakes buffered and excluded from AAC. <b>Performance:</b> AOPs	None	Act immediately to eliminate problems.

	D) Area of suitable black-throated green warbler and cape may warbler habitat.	D) Cooperate with Alberta to test available black-throated green and cape may warbler habitat models for applicability to northwestern Alberta.	Based on sound science, Fish and Wildlife Division priorities, habitat suitability analysis, literature review, observation data.	FMP	SRD communications	SRD communications	<b>Performance:</b> Progress noted in Stewardship Report	None	None
	E) Existing habitat for northern pikeminnow.	E) Maintain Notikewin Habitat Zone, which buffers only known pikeminnow habitat within the FMA.	ANHIC	FMP	Spatial harvest sequence	Regular updates to inventory.	<b>FMP:</b> Zone excluded from AAC. <b>Performance:</b> AOPs	None	Act immediately to eliminate problems.
1.2.1.2 Work cooperatively with Provincial wildlife specialists to help ensure the continued survival of wildlife species considered at risk.	A) Inventory of wildlife species identified by the Province as a concern in the FMA Area.	A) A listing of species of concern occurring within the FMA Area is maintained.	COSEWIC and provincially listed species, ANHIC, Fish and Wildlife Division experts	Species at Risk Act, Wildlife Act	Review of COSEWIC and provincial listed species	COSEWIC and provincially listed species, ANHIC, Fish and Wildlife Division experts	<b>FMP:</b> Species list part of DFMP submission. <b>Performance:</b> Changes noted in Stewardship Report.	None	Update listing.
	B) Best Management Practices for Boreal Caribou.	B) Follow the latest version of the Best Management Practices of the Alberta Caribou Committee. Actively participate in the revised Chinchaga Caribou Landscape Planning Team once this team is struck.	Best Practices' as identified by the Alberta Caribou Committee.	Best Practices' as identified by the Alberta Caribou Committee.	AOPs, Caribou Protection Plans, Operating Ground Rules, relevant guidelines/recovery plans, road construction planning/operations, consultation with experts	Caribou Protection Plans reviewed by ASRD, receive approval	<b>Performance:</b> Caribou Protection Plans outline operations.	None	Incorporate Best Management Practices
	C) Best Management Practices for grizzly bear.	C) Follow the latest version of the Best Management Practices for grizzly bear management, as defined by the Regional Grizzly Bear Recovery Implementation Team	Participation in Regional Grizzly Bear Recovery Implementation Team.	Best Practices' as identified by the regional team	Operating Ground Rules, relevant guidelines/recovery plans, road construction planning/operations, consultation with experts	BMPs, RGBRIT communications, ASRD review of AOPs	<b>Performance:</b> BMPs reflected in operational plans.	None	Incorporate Best Management Practices
<b>CSA SFM Element - 1.3 Genetic Diversity</b>		Conserve genetic diversity by maintaining the variation of genes within species.							
<b>Value - 1.3.1. Genetic integrity of natural tree populations.</b>									
1.3.1.1. Retain "wild forest populations" (5) for each tree species in each seed zone through establishment of in-situ reserves, with an approved controlled parentage program.	Number and area of in situ genetic conservation areas.	Section 20.0 of Standards for Tree Improvement in Alberta outlines requirements for in-situ genetic conservation areas for each seed zone. The regional programs relevant to MDFFP's FMA Area was not completed until late May 2007. Once the regional needs have been evaluated, MDFFP will identify a target for establishment of genetic conservation areas.	Target is a portion of the required number of genetic conservation areas determined in consultation with other FMAs in the same seed zone and Alberta	Standards regulated through Timber Management Regulation 144.2	Conservation areas are designated by a notation. (PNT, CNT)	SRD communications	<b>FMP:</b> Subsequent DFMPs will provide table showing number of genetic conservation areas required in each seed zone and number provided within FMA Area and a map showing locations. <b>Performance:</b> Stewardship Report	At the end of the 10-year DFMP term the target is achieved or exceeded.	None
1.3.1.2 Retain wild forest genetic resources through ex-situ conservation	Number of provenances and genetic lines in ex-situ gene banks and trials	Active ex-situ conservation program for all Controlled Parentage Program plan species and other species in cooperation with Alberta	Proportion of projects and species	Standards regulated through Timber Management Regulation 144.2	Standards for Tree Improvement in Alberta and government/ industry genetic cooperatives	Conservation activities identified in FMP as per Standards for Tree Improvement in Alberta	<b>Performance:</b> Five year reporting in cooperation with Alberta.	Confirmed program plan	Organization/Alberta/ cooperatives

<b>CSA SFM Element - 1.4 Protected Area</b>		Respect protected areas identified through government processes.							
<b>Value - 1.4.1 Ensure protection of protected areas and site of biological significance.</b>									
1.4.1.1 Biologically significant sites are identified within management and operational planning processes and forest management strategies incorporate protective measures.	A) Protection of the Notikewin River valley.	A) The Notikewin River valley, including the Hotchkiss, Meikle and Botha Rivers will be considered a special zone for forest management. Forestry operations will not be scheduled in the spatial harvest sequence.	Wildlife habitat considerations, consultation with Fish and Wildlife experts	FMP	Spatial harvest sequence	Regular updates to inventory.	<b>Performance:</b> No forestry operations scheduled for the Notikewin River Valley during the next 10 years.	None	None
	B) Communication with Twin Lakes Lodge when operating near Twin Lakes	B) The owners/operators of the Lodge will be contacted when operation are planned within 2 km of the Lodge or recreation area.	Social considerations.	FMP	AOPs, Public Consultation Plan	Documentation of consultation processes	<b>FMP:</b> SHS will identify when operations will be scheduled for the area. <b>Performance:</b> The owners will be contacted prior to any operations.	None	None
<b>Value - 1.4.2. Areas with minimal human disturbances within managed landscapes.</b>									
1.4.2.1. Integrate transboundary values and objectives into forest management.	Stakeholder consultation	Ongoing consultation with relevant protected areas agencies.	Link to consultation objective in planning standard or other existing consultation processes	Planning Standard	Management planning	Documentation of consultation processes	<b>Performance:</b> Stewardship Report	None	Adjust strategies in subsequent FMP
<b>CCFM Criterion 2 - Ecosystem Productivity</b>									
<b>Objective</b>	<b>Indicator</b>	<b>Target</b>	<b>Means to Identify Target</b>	<b>Legal/Policy Requirements</b>	<b>Means of Achieving Objective and Target</b>	<b>Monitoring and Measurement</b>	<b>Reporting</b>	<b>Acceptable Variance</b>	<b>Response</b>
<b>CSA SFM Element - 2.1 Ecosystem Resilience</b>									
<b>Value - 2.1.1 Reforested harvest areas.</b>									
2.1.1.1 Meet reforestation targets on all harvested areas	A) Annual % of SR regeneration (performance) surveys	Annually, 100% of areas meet reforestation (performance) target.	ARIS or equivalent reports	Timber Management Regulation	Silviculture program	Regeneration surveys	<b>Performance:</b> ARIS, GDP Stewardship Report	None	Alberta adjusts AACs
	B) Cumulative % of reforested areas that meet reforestation (performance) target.	Cumulatively, 100% of areas meet reforestation (performance) target.	ARIS or equivalent reports and Stewardship Report	Planning Standard	Silviculture program	Regeneration surveys	<b>Performance:</b> ARIS, GDP Stewardship Report	None	Alberta adjusts AACs
<b>Value - 2.1.2 Maintenance of forest landbase.</b>									
2.1.2.1 Limit conversion of forest landbase to other uses	A) Company roads available for use by other commercial forest users and the public.	A) All Company roads will be made available for use by other commercial forest users and the public unless access restrictions are required by the Province.	Land use data	FMP	Maintain current forest cover inventory and land use updates	Inventory and land use systems	<b>Performance:</b> Stewardship Report	Report actual	Adjust net landbase projections in next TSA
	B) Amount of permanent clearings.	B) MDFP will limit its own non-road permanent clearings (i.e., gravel pits and MLLs) to less than 5 hectares annually, over a 5 year period (i.e., 25 ha per 5 years).	Forest Inventory	FMP	AOPs, GDPs, road construction, maintenance and abandonment	AOPs, Road Construction, Maintenance and Abandonment Plan, land use withdrawals	<b>Performance:</b> On a five year basis, total area used for non-road permanent clearings is less than 25 hectares. This will be reported in the Stewardship Report.	Report actuals.	
2.1.2.2 Recognize lands affected by insects, disease or natural calamities	Area affected.	Area affected by significant outbreaks, infestations, natural calamities.	SRD forest health surveys, inventory updates	Planning Standard, Alberta Forest Health Strategy and Shared Roles and Responsibilities between SRD and the Forest Industry	Maintain up-to-date information	Alberta surveys with industry cooperation	<b>Performance:</b> AOP and Stewardship Report	Report actuals	Event specific

Value - 2.1.3 Control invasive species									
2.1.3.1 Control non-native plant species (weeds)	Noxious weed program	Noxious weed program in place and implemented	Field inventories	Directive 2000-06	Co-operative programs	Field inventories	<b>Performance:</b> Inspections summarized in Stewardship Report	Report actuals	Improve weed program
<b>CCFM Criterion 3 - Soil and Water Resources</b>									
<b>Objective</b>	<b>Indicator</b>	<b>Target</b>	<b>Means to Identify Target</b>	<b>Legal/Policy Requirements</b>	<b>Means of Achieving Objective and Target</b>	<b>Monitoring and Measurement</b>	<b>Reporting</b>	<b>Acceptable Variance</b>	<b>Response</b>
<b>CSA SFM Element - 3.1 Soil quantity and quality</b>									
Value - 3.1.1 Soil productivity.									
3.1.1.1 Minimize impact of roading and bared areas in forest operations.	Compliance with OGR	Less than 5% by block	Direction from Alberta	OGRs and Soils Guidelines	Effective planning and supervision of operations	Field inspection reports and audits	Inspection reporting	None	Immediate remedial action to correct
3.1.1.2 Minimize incidence of soil erosion and slumping.	Incidence of soil erosion and slumping	Complete compliance	Direction from Alberta	OGRs and Soils Guidelines	Effective planning and supervision of operations and adherence to relevant OGRs.	Field inspection reports and audits	Inspection reporting	None	Immediate remedial action to correct
<b>CSA SFM Element - 3.2 Water quantity and quality</b>									
Value - 3.2.1 Water quantity and quality.									
3.2.1.1 Limit impact of timber harvesting on water yield	Forecast impact of timber harvesting on water yield.	Zero Water Act penalties. Complete compliance with FMP	Water Strategy and local needs	Water Act, Planning Standard	Adherence to forecast harvest sequence and relevant OGRs.	Report on area harvested compared with planned harvest area.	<b>Performance:</b> Stewardship Report	Report actuals	Adjust harvest pattern if problems arise
Value - 3.2.2 Effective riparian habitats.									
3.2.2.1 Minimize impact of operations in riparian areas	Riparian buffers maintained as outlined in OGRs.	Complete compliance	Direction from Alberta	OGRs	Effective planning and supervision of operations	AOPs	<b>Performance:</b> AOP	None	Immediate correction and/or administrative penalty
<b>CCFM Criterion 4 - Global Ecological Cycles</b>									
<b>Objective</b>	<b>Indicator</b>	<b>Target</b>	<b>Means to Identify Target</b>	<b>Legal/Policy Requirements</b>	<b>Means of Achieving Objective and Target</b>	<b>Monitoring and Measurement</b>	<b>Reporting</b>	<b>Acceptable Variance</b>	<b>Response</b>
<b>CSA SFM Element - 4.1 Carbon uptake and storage</b>									
Value - 4.1.1 Impact of forestry operations on carbon budgets.									
4.1.1.1 Identify potential impacts of forestry operations on forest carbon budgets.	Research related to carbon budgets in northwestern Alberta.	MDFP will provide letters of support for research related to carbon budgets submitted to the Manning Forestry Research Fund.	Research Fund communication, reports	FMP	Manning Forestry Research Fund	Research Fund communication, reports	<b>Performance:</b> Research Fund annual reports/updates.	Report actuals	None
<b>CSA SFM Element - 4.2 Forest land conversion</b>									
See 2.1.2.1									

CCFM Criterion 5 - Multiple Benefits to Society									
Objective	Indicator	Target	Means to Identify Target	Legal/Policy Requirements	Means of Achieving Objective and Target	Monitoring and Measurement	Reporting	Acceptable Variance	Response
<b>CSA SFM Element - 5.1 Timber and non-timber benefits</b>									
Value - 5.1.1 Sustainable timber supplies.									
5.1.1.1 Establish appropriate AACs	Process and standards described in Annex 1 of the Planning Standard are followed.	Complete compliance with AAC level.	Consultation in planning process	Forests Act and Timber Management Regulation	Effective implementation of planning process	Multiple means: TPRS, ARIS, AOP's, Stewardship reports, filed inspection reports	Progressive and continuous	Issue specific	Adjust AAC using most current and relevant information
<b>CSA SFM Element - 5.2 Communities and sustainability</b>									
Value - 5.2.1 Risk to communities and landscape values from wildfire is low.									
5.2.1.1 To reduce wildfire threat potential by reducing fire behaviour, fire occurrence, threats to values at risk and enhancing fire suppression capability	A) Percentage reduction in Fire Behavior Potential area within the FireSmart Community Zone.	A) Currently there are no FireSmart Community Zones identified within the FMA at this time.	Planning process, Provincial wildfire threat assessment	Planning Standard	Spatial harvest sequence, thinning, partial harvest techniques, prescribed burns	AOPs, Compartment Assessments	<b>Performance:</b> Identification of new zones reported in Stewardship Report	None	None
	B) Percentage reduction in Fire Behavior Potential area (ha) across the FMA now and over the planning horizon.	B) At 10 years, reduce the area (ha) in the extreme and high Fire Behaviour Potential (FBP) rating categories by 1% across the FMA.	Planning process, Provincial wildfire threat assessment	Planning Standard	Spatial harvest sequence, thinning, partial harvest techniques, prescribed burns	AOPs, Compartment Assessments	<b>FMP:</b> Maps and Tables of indicator at 0, 10, 20, and 50 yrs by FMU. <b>Performance:</b> Stewardship Report	Issue specific	Adjust harvest sequence
Value - 5.2.2 Provide opportunities to derive benefits and participate in use and management									
5.2.2.1 Integrate other uses and timber management activities	A) Company roads available for use by other commercial forest users and the public.	A) See 2.1.2.1 A							
	B) Communication with Twin Lakes Lodge when operating near Twin Lakes	B) See 1.4.1.1 A							
	C) Refer operational plans to all trappers affected by harvesting operations.	C) Attempts made to notify 100% of trappers affected by harvesting operations prior to submission of AOP.	Consultation and co-operation	Legislation and policy	Effective implementation of PCP during AOP development	Documentation of communications	<b>Performance:</b> Efforts are reported in the Stewardship Report.	None	Event specific.
	D) Refer operational plans to all guides and outfitters affected by harvesting operations.	D) Attempts made to notify 100% of guides and outfitters affected by harvesting operations prior to submission of AOP.	Consultation and co-operation	Legislation and policy	Effective implementation of PCP during AOP development	Documentation of communications	<b>Performance:</b> Efforts are reported in the Stewardship Report.	None	Event specific.
	E) Protection of aesthetic resources along Highway 35 and the Chinchaga Forestry Road.	E) A Special Management Zone has been identified along Highway 35 and the Chinchaga Forestry Road, to recognize aesthetic concerns.	Target based on social/aesthetic concerns, consultation.	FMP	Effective planning within the Special Management Zone	AOPs, as-built plans, road-side inspections	<b>Performance:</b> AOPs incorporate aesthetic concerns within the Zone.	Subjective target.	Adjust future operations.
5.2.2.2 Work with other stakeholders on their fire protection plans	Paddle Prairie community (10 km) fire protection plan	MDFP contributes to the efforts of Paddle Prairie on their community fire protection plan.	Target specific to community fire protection plan.	FMP	Public Consultation Plan	Reports, documentation of communications	<b>Performance:</b> Efforts are reported in the Stewardship Report.	None	Event specific.
	Other infrastructure protection plans	MDFP will participate in protection plans for any facilities and infrastructure within or bordering on the FMA.	Target specific to fire protection plans.	FMP	Public Consultation Plan	Reports, documentation of communications	<b>Performance:</b> Efforts are reported in the Stewardship Report.	None	Event specific.
Value - 5.2.3 Forest productivity.									

5.2.3.1 Maintain Long Run Sustained Yield Average.	Regenerated stand yield compared to natural stand yield.	No net decrease from the natural stand productivity.	FMP Timber Supply Analysis	Planning Standard	Effective implementation of plans	Stewardship Report	<b>Performance:</b> Reforestation Stewardship Report	Report Actual	Adjust AAC using most current and relevant information
<b>CCFM Criterion 6 - Accepting Society's Responsibility for Sustainable Development</b>									
<b>Objective</b>	<b>Indicator</b>	<b>Target</b>	<b>Means to Identify Target</b>	<b>Legal/Policy Requirements</b>	<b>Means of Achieving Objective and Target</b>	<b>Monitoring and Measurement</b>	<b>Reporting</b>	<b>Acceptable Variance</b>	<b>Response</b>
<b>CSA SFM Element - 6.1 Aboriginal and treaty rights and Aboriginal forest values</b>									
Value - 6.1.1 Compliance with government regulations and policies.									
6.1.1.1 Implement Public Consultation Process (PCP).	A) Meet Alberta's current expectations for aboriginal consultation. B) Paddle Prairie Metis Settlement included in the Company's Public Consultation Process (PCP) and has been invited to participate as a member of the FMP planning team	PCP has been approved by Alberta.	Alberta to provide direction.	Planning Standard	Effective implementation of PCP	Documentation of communications	Reports as required in PCP.	None	Adjust activities
		Meetings are held with Paddle Prairie representatives as indicated in the PCP.	Target based on Paddle Prairie interest and economic/logistic considerations.	FMP	Public Consultation Plan	Reports, documentation of communications	<b>Performance:</b> Meetings reported in the annual PCP Report.	None	Event specific.
6.1.1.2 MDFP will provide Paddle Prairie Metis Settlement with forestry related economic opportunities	Economic opportunities at Paddle Prairie.	MDFP will work with Paddle Prairie to develop long term contracting agreements, including purchase of sawlogs and provision of harvesting opportunities.	Consultation	FMP	Public Consultation Plan	Reports, documentation of communications	<b>Performance:</b> Minutes from meetings with Paddle Prairie Band Council indicate economic opportunities are discussed. Records of any contract agreements.	None	Event specific.
<b>CSA SFM Element - 6.2 Public participation and information for decision-making</b>									
Value - 6.2.1 Meaningful public involvement is achieved.									
6.2.1.1 Implement Public Consultation Process (PCP).	Meet expectations of Section 5 of CSA Z809-02.	PCP has been approved by Alberta.	Consultation	Planning Standard	Effective implementation of PCP	Reports, documentation of communications	Reports as required in PCP.	None unless otherwise approved by Alberta.	Adjust activities

- (1) For all indicators and targets on a five year reporting period, the period will be consistent with the FMA Quadrant end.
- (2) Patch refers to a forest stand in the same seral stage and not split by a linear feature greater than 8 m wide. Linear features in this definition include roads, pipelines, powerlines, and rivers, but does not include seismic lines. Manning Diversified, through its harvesting activities, creates patches of young seral stages. By employing a range of harvest block sizes, the Company can help maintain patch diversity. 'Regeneration' refers to the youngest seral stage modeled (i.e., patches < 20 years old).
- (3) Old interior forest refers to a forested area greater than 100 ha located beyond **edge effect buffer zone** along the **forest edge**. Edge effect buffer zone: 60 m where adjacent area is non-forested or less than 40 years old; 30 m where adjacent forest stand is 40 years or older; 0 m where adjacent stand is mature forest. Forest edge: a linear disruption in forest cover greater than 8 m wide, or; the line along which forest seral stage class changes. A proxy of 120 hectares of old forest, regardless of adjacent vegetation, was used in place of 100 hectares.
- (4) Downed woody debris refers to wood lying at an angle of less than 45 degrees from the ground and having a diameter greater than 7.5 cm.
- (5) Wild refers to genetic materials of native species originating from natural regeneration.