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1.0 Biological Diversity (Criterion)

1.1 Ecosystem Diversity (Element)

1.1.1 Natural Range of Variation (Value)

Objective	Indicator(s)	Target(s)	Frequency	C/R ¹	Approach/ Context/ Intent
1.1.1.1 Conservation of the biological diversity of Saskatchewan's forests.	1. Amount of old and very old forest by species group within each of the FMA's Ecological MU's	15% of Productive Forest	Annual and each 5 yrs ²	R C	<ul style="list-style-type: none"> • GIS analysis using standard inventory • Productive forest includes land in the net and partially excluded landbase. It does not include Parks, RAN's, or recreation reserves. • Old and very old forest definitions provided by provincial NFP document (2014 draft). • Species groups are as follows: <ul style="list-style-type: none"> ○ H: AOH, TAB ○ HS/SH: PMW, SMW, HPM ○ bS: BSJ, BSL ○ jP: JPL ○ wS: WSF
	2. Area of very old forest by species group.	5% of Productive Forest within each of the FMA's Ecological MU's by species group in Very Old Forest	Annual and each 5 yrs ²	R C	
	3. Regeneration of softwood consistent with Silviculture Ground Rules (SGRs).	Minimum average softwood stems/ha at time of regeneration survey by pre-harvest stand type: <ul style="list-style-type: none"> • HS: Min 300 sph on avg • SH: Min 800 sph on avg • S: Min 1000 sph on avg 	Annual and each 5 yrs ²	R C	<ul style="list-style-type: none"> • Compilation of regeneration surveys from most previous years and GIS analysis of regeneration survey areas in comparison to pre-harvest inventory of stand type • Assumption that hardwood stems will naturally come back to pre-harvest stand conditions but considered management is required to ensure softwood presence. • Regen surveys completed each year to be compiled to deliver average sph values for each cover type across the FMA. A 5 year average will be used for assessing compliance. • Stems per ha targets taken from Silviculture Ground Rules document assuming densities are typically between 3000-10,000 sph total at time of regen surveys. • Pre-harvest stand type to be defined using the forest inventory's pre-harvest Cover Species Group (CSG).
	4. Area of old/very old Interior Forest patches.	≥25% of the Productive Forest retained to meet indicator 1 above is to be in an interior condition. To be met for each of the 5 species groups ID's in indicator 1.	Annual and each 5 yrs ²	R C	

¹ Where C = Compliance and R = Reporting functions

² For reporting information only on an annual basis, and compliance at the end of 5 year period (2019)

Objective	Indicator(s)	Target(s)	Frequency	C/R ¹	Approach/ Context/ Intent										
	5. Area of residual trees left after harvest.	Harvested areas to contain an average 9% area insular retention. Individual events should range from 3-15%. Best Mgmt Practice - mix of trees, clumps, islands.	Annual and each 5 yrs ²	R C	<ul style="list-style-type: none"> Visual assessment using aerial photography or remote sensing with potential ground-truthing for calibration Assess a sample of representative events. A minimum of 30 events is suggested as an initial audit size. Gross area to be measured using the outer boundary of all harvest areas completed in a given operating year. Insular retention area to be measured in ha for patches/clumps and through a basal-area equivalent for single trees (e.g. if pre-harvest BA is 20 m², then each 20m² of BA retained equals one ha). Average % = total retention ha /total gross ha. Area forester can exempt blocks for requirement for forest health reasons. 										
	6. Size distribution of harvest events.	<table border="0"> <tr> <td><100 ha</td> <td>10% +/-5%</td> </tr> <tr> <td>100 to 1,500 ha</td> <td>50% +/-5%</td> </tr> <tr> <td>1,501 to 3,500 ha</td> <td>20% +/-5%</td> </tr> <tr> <td>3,501 to 8,000 ha</td> <td>20% +/-5%</td> </tr> <tr> <td>8,000+ ha</td> <td>0% +/-5%</td> </tr> </table>	<100 ha	10% +/-5%	100 to 1,500 ha	50% +/-5%	1,501 to 3,500 ha	20% +/-5%	3,501 to 8,000 ha	20% +/-5%	8,000+ ha	0% +/-5%	Annual and 5 yrs	R R	<ul style="list-style-type: none"> GIS analysis using standard inventory To be evaluated using events created since the start of the FMP (including areas in those events logged prior to the FMP). Stands within 500m of each other are considered in the same event (matrix area included in event size).
<100 ha	10% +/-5%														
100 to 1,500 ha	50% +/-5%														
1,501 to 3,500 ha	20% +/-5%														
3,501 to 8,000 ha	20% +/-5%														
8,000+ ha	0% +/-5%														

1.2 Species Diversity (Element)

1.2.1 Quantity and Quality of Forest Habitat (Value)

Objective	Indicator(s)	Target(s)	Frequency	C/R ¹	Approach/ Context/ Intent
1.2.1.1 Maintain habitat for identified forest dwelling species.	7. Area of Moose Habitat within the FMA	___ ha of suitable cover habitat present in the FMA. ___ ha of suitable forage habitat present in the FMA.	Annual and 5 yrs	R	<ul style="list-style-type: none"> GIS analysis using standard inventory Cover habitat defined as stands >= 50 years belonging to the WSF / BSL / BSJ / JLP / PMW / SMW / HSM / HPM types with a crown closure between 26-80% (B/C density classes). Forage habitat defined as any stand < 20 yrs old.
	8. Area of Fisher Habitat within the FMA	___ ha of suitable Fisher Habitat present in the FMA.	Annual and 5 yrs	R	<ul style="list-style-type: none"> GIS analysis using standard inventory Fisher habitat defined as stands 50-120 years old belonging to WSF/BSL/BSJ/SMW/HSM types with C/D density found in patches >=10,000 ha. Stands <500m apart were considered as part of the same patch.
	9. Area of Caribou Habitat in the FMA	___ ha of suitable (undisturbed) Caribou Habitat in the FMA.	Annual and 5 yrs	R	<ul style="list-style-type: none"> GIS analysis using standard inventory Caribou habitat defined asTBD

1.3 Genetic Diversity (Element)**1.3.1 Natural Genetic Diversity (Value)**

Objective	Indicator(s)	Target(s)	Frequency	C/R ¹	Approach/ Context/ Intent
1.3.1.1 No loss of natural genetic diversity through forest management activities.	10. Percentage of seedlots planted that are from wild seedlots as defined by provincial standards.	0% genetically modified seed	Annual	R	<ul style="list-style-type: none"> Review of seed source records for previous year's planting program Intent is to not use genetically modified seed sources Tree Orchard seed is still considered wild or natural seed source

2.0 Ecosystem Condition and Productivity (Criterion)**2.1 The stability, resilience and rates of biological production in the forest ecosystem (Element)****2.1.1 Natural Ecosystem Processes (Value)**

Objective	Indicator(s)	Target(s)	Frequency	C/R ¹	Approach/ Context/ Intent
2.1.1.1 Maintain the stability, resilience and rates of biological production in forest ecosystems.	11. Average annual softwood and hardwood harvest volume vs. approved harvest volumes (HVS).	≤ _____ m ³ /yr of Hardwood (5 yr Average) ≤ _____ m ³ /yr of Softwood Sawlog (5 yr Average) Report on Softwood Pulpwood m ³ /yr	Annual and each 5 yrs ²	C	<ul style="list-style-type: none"> Review and compilation of previous years delivery and sales records Years 1-5 of FMP used for first assessment period. Years 6-10 used for second assessment period. Totals include scaled volumes and merchantable waste volume left in block (not tamarack). Includes independent operator's volume.
	12. Percent of harvested areas regenerated and assessed as free-to-grow within the 14yr assessment window.	100% meets free to grow standard.	Annual and each 5 yrs ²	C	<ul style="list-style-type: none"> Blocks harvested 14 years prior would be assessed and held to the free to grow standards in place at time of harvest.
	13. Cumulative area of net landbase impacted by stand-replacing natural disturbance	Report out on the percentage (%) of net landbase impacted (cumulative area from start of FMP).	Annual	R	<ul style="list-style-type: none"> Fire or blowdown with no expectation for salvage during the term of the plan. report of cumulative net productive area burned since 2014 summarized as % of net landbase impacted by fire Fires >100 ha to be mapped clearly (skipped areas mapped) by govt Blowdown impact >100ha and >50% area affected, then treated as stand replacing. To be mapped/ recorded when data are available on locations and salvage extent.

3.0 Soil and Water (Criterion)**3.1 Quantity and Quality of Soil and Water (Element)****3.1.1 No loss of quantity or quality of soil and water (Value)**

Objective	Indicator(s)	Target(s)	Frequency	C/R ¹	Approach/ Context/ Intent
3.1.1.1 Maintain and/or enhance the quantity and quality of soil and water.	14. Percentage (%) of SASK MOE inspected harvest blocks that are in compliance with provincial standards related to soil disturbance.	100% compliance	Annual	C	<ul style="list-style-type: none"> Review of Saskatchewan Environment previous years compliance inspections Each block assigned a pass/fail condition with the variances allowed.
	15. Percentage (%)of SASK MOE inspected harvest blocks which are in compliance with provincial standards related to road reclamation.	100% compliance	Annual	C	<ul style="list-style-type: none"> Review of Saskatchewan Environment previous years compliance inspections Each block assigned a pass/fail condition with the variances allowed.
	16. Percentage (%)of SASK MOE inspected harvest blocks/roads found in compliance with Aquatic Habitat Protection Permits.	100% compliance	Annual	C	<ul style="list-style-type: none"> Review of Saskatchewan Environment previous years compliance inspections Each block assigned a pass/fail condition with the variances allowed.
	17. Percentage (%)of SASK MOE inspected harvest blocks that are in compliance with the FMA standards related to riparian area management.	100% compliance	Annual	C	<ul style="list-style-type: none"> Review of Saskatchewan Environment previous years compliance inspections Each block assigned a pass/fail condition with the variances allowed.

4.0 Role in Global Ecological Cycles (Criterion)**4.1 Carbon Cycle (Element)****4.1.1 Productive Land Base (Value)**

Objective	Indicator(s)	Target(s)	Frequency	C/R ¹	Approach/ Context/ Intent
4.1.1.1 Mitigate the impact of the forest and forest activities on the productive land base. ³	18. Area (ha) of the net land base converted to Permanent Access.	<300 ha per year on average. Max 3000 ha over 10 years.	Annual And Each 5 years	R	Based on modeling, estimate 750km of new Permanent Access in the first 10 year period (assumed avg. 75km/ year at a width of 40m = 300ha/ year)

³ Refer to Indicators #10 and #12 regarding reforestation

5.0 Economic and Social Benefits (Criterion)

5.1 Economic Benefits (Element)

5.1.1 Sustainable economic benefits over the term of the FMP (Value)

Objective	Indicator(s)	Target(s)	Frequency	C/R ¹	Approach/ Context/ Intent
5.1.1.1 Maximize the economic benefits derived from the forest without compromising the integrity of the forest ecosystem.	19. Annual Harvest volume shipped to Manufacturing facilities as a percentage of harvest allocations at FMA level.	FMA harvest volume to be ±25% of allocated volume on an annual basis.	Annual	R	<ul style="list-style-type: none"> • Compilation of sales, delivery data for PA FMA harvested volume • Harvested volume to include merchantable scaled volumes, including independent operators. • +/- 10% over a 5 year period
	20. Spatial distribution of harvest across the FMA	(Addressed through adherence to Tactical Plan)	Annual	R	<ul style="list-style-type: none"> • GIS analysis of actual harvest pattern and comparison to tactical plan metrics • Tactical plan metrics to be area harvested by stand type by _____. • Intent is to provide consistency of operations with a tactical plan. Designed to ensure a balanced and equitable distribution for future harvest is achievable and that reasonable economic opportunities remain available for the future.
	21. Harvest volume achieved vs predicted by inventory / G&Y model	One report comparing inventory predictions to actual harvest levels.	Once by 2019	R	<ul style="list-style-type: none"> • Production of a report on Analysis of inventory predictions of merchantable volume to actual harvest outcomes • To provide knowledge on reality of inventory allowing for continuous improvement of HVS and other decision making tools

5.2 Distribution of Benefits (Element)**5.2.1 Fair Distribution of Benefits (Value)**

Objective	Indicator(s)	Target(s)	Frequency	C/R¹	Approach/ Context/ Intent
5.2.1.1 To ensure other forest uses are addressed.	22. On-going consultation with other stakeholders at various levels of forest management planning using established advisory committees or other forums which are effective.	Ongoing use of a Public Advisory Group to consult with public annually or as determined by the PAG themselves.	Annual	R	<ul style="list-style-type: none"> Review and summary of PAG meeting minutes and other PAG correspondence Intent is to include non-timber interests are included in land use planning Online Resource at www.sakaw.ca
	23. Develop and maintain a thematic map of non-timber resources and non-timber forest use activities.	Maintain a map/dataset of known information on legal cabins, visually sensitive areas, ski trails, trapper trails, known sensitive wildlife site, etc.	Annual	R	<ul style="list-style-type: none"> Production of map indicating locations of non-timber resources of concern noting improvement since previous year. Map used for planning purposes to ensure other resource values are considered.

5.3 Sustainability of Benefits (Element)**5.3.1 No Loss of Benefits (Value)**

Objective	Indicator(s)	Target(s)	Frequency	C/R¹	Approach/ Context/ Intent
5.3.1.1 Maintain or enhance benefits.	24. Level of employment (direct and indirect)	Level of employment associated with FMA is constant on a 5-year rolling average	Annual	R	Retain jobs. The intent is to retain valuable expertise and skill labor for the Forestry Sector in the region. Subject to market demand and mill closures. Create socio-economic value on the resource. Consider employment multiplier for this.
	25. Level of investment in training and skills development	Each employee receives at least two (2) days of training per year		R	The intent is to give opportunities to employees for advancing their career path and succession planning.

6.0 Society's Responsibility (Criterion)**6.1 Aboriginal and Treaty Rights (Element)****6.1.1 To ensure Aboriginal and Treaty Rights are respected within the context of planning and implementing forest activities (Value)**

Objective	Indicator(s)	Target(s)	Frequency	C/R¹	Approach/ Context/ Intent
6.1.1.1 To ensure Aboriginal and treaty rights are respected within the context of planning and implementing forest activities.	26. Percentage (%) of "within" FMA area Aboriginal communities involved in ongoing discussions, review of operational and forest management plans and co-management/ advisory processes.	100% of the "within" FMA area Aboriginal communities shall be given opportunity to be involved in ongoing discussions, review of operational and forest management plans and co-management / advisory board processes.	Annual	R	<ul style="list-style-type: none"> Review and report on aboriginal consultation activities undertaken during previous year opportunity to be involved is the key List of Dates and Aboriginal community and purpose of meeting

6.2 Aboriginal traditional land use and forest based ecological knowledge (Element)**6.2.1 Protection of aboriginal traditional land use and forest based ecological knowledge (Value)**

Objective	Indicator(s)	Target(s)	Frequency	C/R¹	Approach/ Context/ Intent
6.2.1.1 To avoid impacting culturally important sites.	27. Spatial identification and operational protection of known culturally significant Aboriginal sites.	100% of known culturally significant Aboriginal sites are spatially identified and considered in forest management activities. 100% of new sites recorded	Annual Annual	R R	<ul style="list-style-type: none"> Report on number of known sites negatively impacted by forestry activities GIS analysis to determine if previous years harvests contained previously known sites and where overlap is present report on actions taken to protect sites Compilation of Heritage Assessments required and their results Report on completion of required post-harvest heritage assessments completed and number of site found

6.3 Forest Community Well-being and Resilience (Element)**6.3.1 Sustainable Forest Communities (Value)**

Sakâw

Objective	Indicator(s)	Target(s)	Frequency	C/R¹	Approach/ Context/ Intent
6.3.1.1 To ensure local communities are involved in the forest management activities.	28. Sakaw Website with a specific section on Public Information	Post 100% of FMP and operating plans and annual reports online	Annual	R	Track the website analytics for number of visitors per year and from what geographic area in Saskatchewan
	29. Stakeholders engagement is occurring	Report completed on the number and type of stakeholders engaged.	Annual	R	<ul style="list-style-type: none"> • Intent is to engage, support and promote the use of forests within the communities. •

6.4 Fair and Effective Decision-making (Element)**6.4.1 Involvement of Stakeholders in FMP Development and Implementation (Value)**

Objective	Indicator(s)	Target(s)	Frequency	C/R¹	Approach/ Context/ Intent
6.4.1.1 Maximize the involvement of stakeholders in FMP development and implementation.	30. PAG meetings are occurring on a regular basis and allow for input into forest management.	A minimum of two PAG meetings to occur each year, one could be a field trip.	Annual	R	Publish PAG Meeting Minutes after each meeting.

6.5 Informed Decision Making (Element)

6.5.1 Information about and for Forest Management should be Publicly Available (Value)

Objective	Indicator(s)	Target(s)	Frequency	C/R ¹	Approach/ Context/ Intent
6.5.1.1 Ensure that the available information for forest management is current and available.	31. Age of current forest inventory for the licence area (based on photography age).	100% of the FMA area shall have a forest inventory that is less than 20 years old.	5 years	R	Ensure that inventory data is kept up-to-date so that it can support forest management decision such as HVS forecasting, wildlife habitat retention, etc.
	32. FMP and Operating Plan are made publicly available.	Posted online and available upon request.	Ongoing	R	www.Sakaw.ca Downloadable .pdf maps posted online