



MISTIK MANAGEMENT LTD.

APRIL 2022

2020/2021 ANNUAL REPORT

Mistik Management Ltd. and L&M Wood Products
Forest Management Areas



DEVELOPED WITH  silvaco.com

Mistik Management Ltd. 2019-2039 20-year Forest Management Plan

2020/21 Annual Report

for the

Mistik Management Ltd. and L&M Wood Products (2018) LP
Forest Management Agreement Areas.

Submitted by

Niska Hodgson, RPF

Planning Manager, Mistik Management Ltd.

April 28, 2022



1 TABLE OF CONTENTS

1	Table of Contents	2
2	Introduction	3
3	FMP Target Summary	4
4	FMP Targets	4
5	FMP Standard Reporting Requirements	49
5.1	Management Implementation Team (MIT)	49
5.2	Annual Report Content.....	49
5.2.1	VOIT Tracking and Monitoring.....	49
5.2.2	FMP Registry	50
5.2.3	Silviculture Effectiveness Monitoring	52
5.2.4	Operational Implementation of the FMP	54
	Appendix A: Supporting Data	57

2 INTRODUCTION

Mistik Management Ltd. (“Mistik”) provides forest management services on behalf of its owners, NorSask Forest Products LP (“NorSask”), and Meadow Lake Mechanical Pulp Inc. (“MLMP”), both located near Meadow Lake, SK. Mistik also provides forest management services for NorthWind Forest Products LP (“NorthWind”) located in Glaslyn SK. Both NorSask and NorthWind are owned by Meadow Lake Tribal Council.

Mistik and NorthWind conduct their forestry operations within the context of a 20-year Forest Management Plan (FMP) as required under provincial legislation and forest management agreements in Saskatchewan, Forest Management Plans must meet the requirements of the *Saskatchewan Environmental Code, Forest Management Planning Standard* (“FMP standard”). Mistik’s FMP provides strategic-level direction for management of forest resources within the Mistik and L&M Forest Management Agreement areas¹. The FMP establishes goals, objectives, and strategies to guide forest management activities, describes desired future forest conditions, and seeks to address land and resource use. Mistik’s 2019-2039 20-year FMP was approved on May 23, 2019.

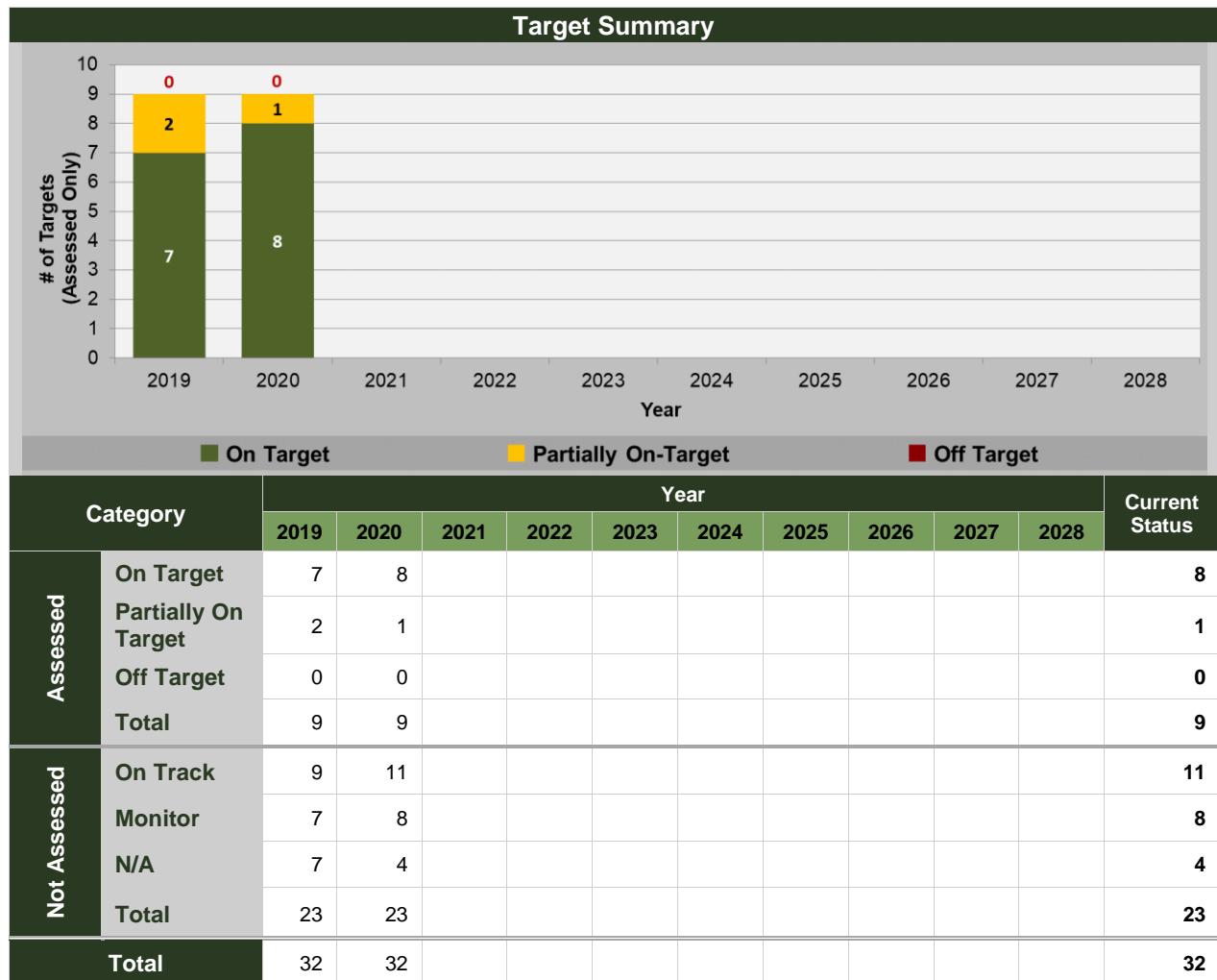
This annual report is being submitted to fulfil the FMP reporting requirement of section 1-54 of the provincial FMP standard. The report covers the timeframe of April 1, 2020 – March 31, 2021, and assesses progress on FMP values, objectives, indicators, and targets (“VOITs”), public involvement, non-timber values, natural disturbances, compliance with legislation, and other FMP commitments.

Each FMP indicator has a defined assessment timeframe of an annual, 5-year, or 10-year basis (refer to Section 4 – FMP Targets). Although most indicators are reported on annually, a more formal assessment is made according to the defined assessment timeframe. Annual reporting of indicators that are not being formally assessed outlines if the indicator is “on track” to meet the desired objective. The FMP Management Implementation Team (MIT) made up of company and Ministry of Environment representatives, reviews the annual report each year to determine why any indicators may be “off track” and if adjustments to procedures or operations need to be made.

For a full understanding of the FMP and indicators used, please refer to the *Mistik 2019-2039 20-year Forest Management Plan* which can be found on Mistik’s website (www.Mistik.ca).

¹ The L&M Forest Management Agreement is now held by NorthWind Forest Products. Until such time as the L&M FMA is reassigned to NorthWind Forest Products LP, Mistik will continue to reference L&M throughout the FMP and annual reports for activities undertaken on the L&M Forest Management Agreement area.

3 FMP TARGET SUMMARY

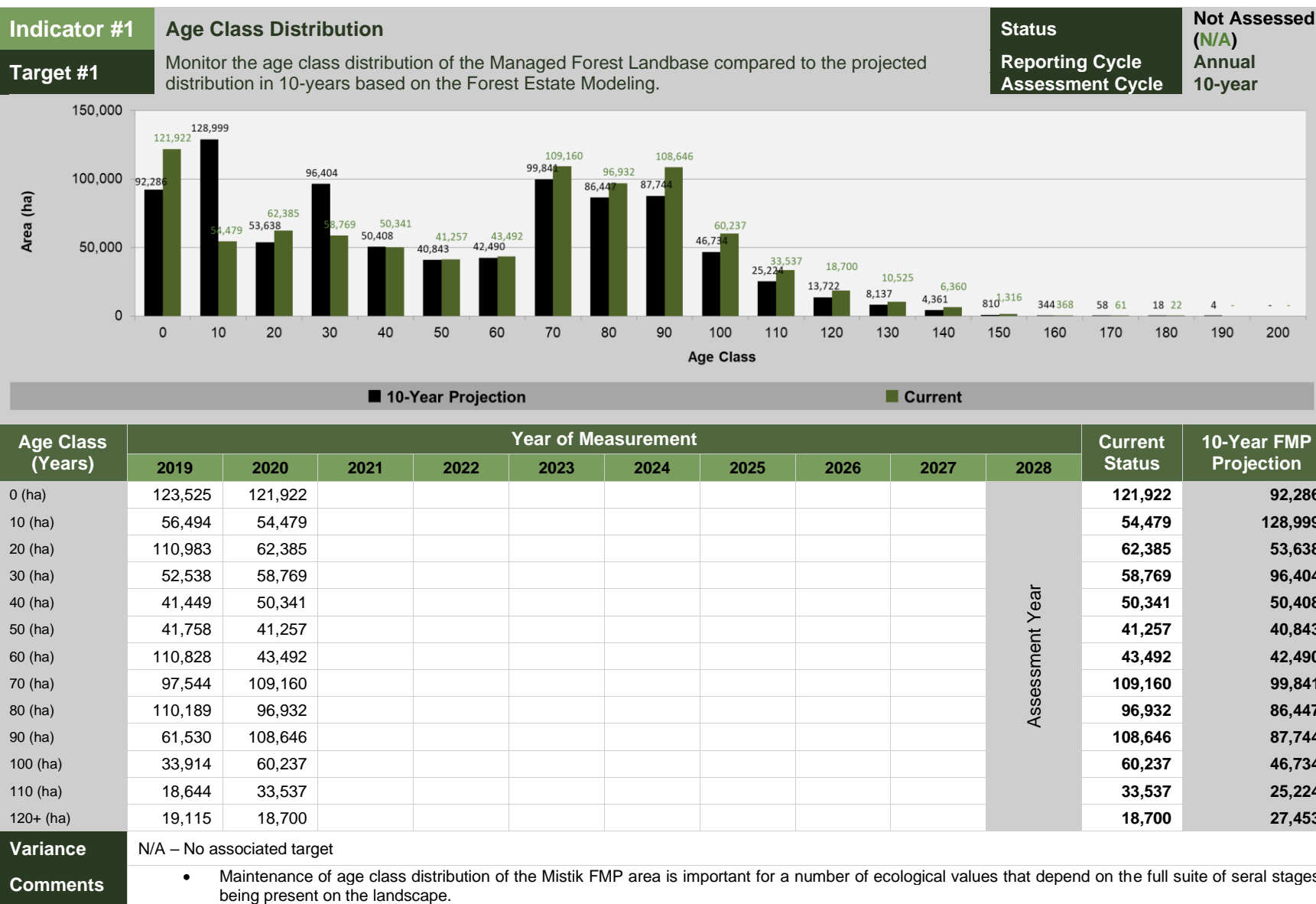


4 FMP TARGETS

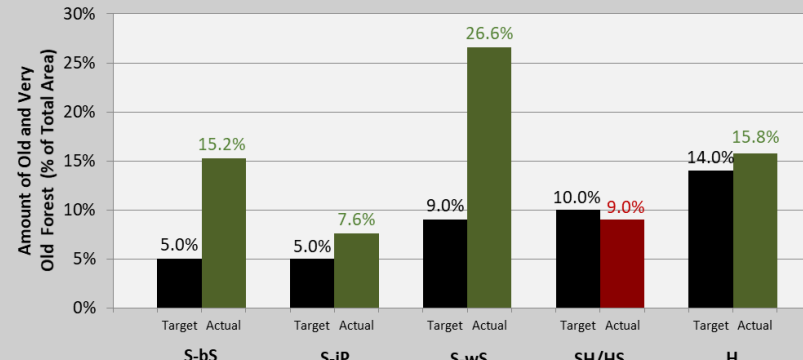
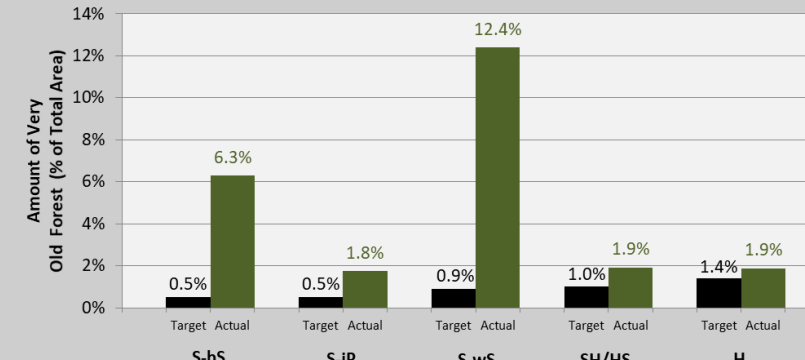
Reporting Item	Description	Status (Parts)	Reporting Cycle	Assessment Cycle	Next Assessment Year	Location
<u>Target 1</u>	Age Class Distribution	Not Assessed (N/A)	Annual	10-Year	2028	Page 7.
<u>Target 2a</u>	Percent for the forest landbase that is old and very old (10 parts)	Not Assessed (Monitor)	Annual	10-Year	2028	Page 9.
<u>Target 2b</u>	Standard deviation of old forest area by management unit (5 parts)	Not Assessed (Monitor)	Annual	10-Year	2028	Page 10.

Reporting Item	Description	Status (Parts)	Reporting Cycle	Assessment Cycle	Next Assessment Year	Location
<u>Target 3</u>	Size class distribution of harvest events (5 parts)	Not Assessed (Monitor)	5-year	10-Year	2028	Page 11.
<u>Target 4</u>	Tree retention after harvest (2 parts)	Not Assessed (Monitor)	Annual	5-Year	2023	Page 13.
<u>Target 5</u>	The softwood component in hardwood stands in maintained	Not Assessed (N/A)	Annual	5-Year	2023	Page 14.
<u>Target 6</u>	Relative abundance of SGR Forest Types are forecasted to be maintained at next rotation (8 parts)	Not Assessed (Monitor)	Annual	5-Year	2023	Page 16.
<u>Target 7a</u>	Current habitat availability for Fisher vs. predicted future (modelled) supply	Not Assessed (On Track)	Annual	5-Year	2023	Page 17.
<u>Target 7b</u>	Habitat availability for Caribou (2 parts)	On Target (2/2)	Annual	Annual	Annual	Page 18.
<u>Target 7c</u>	Current habitat availability for Moose vs. predicted future (modeled) supply	On Target	Annual	Annual	Annual	Page 20.
<u>Target 8</u>	Seedlings are from wild or improved seed sources	Not Assessed (On Track)	Annual	5-Year	2023	Page 21.
<u>Target 9</u>	Post-harvest areas are successfully regenerated	Not Assessed (On Track)	Annual	5-Year	2023	Page 22.
<u>Target 10</u>	Change in the managed forest landbase area	Not Assessed (On Track)	Annual	5-Year	2023	Page 23.
<u>Target 11</u>	Net area disturbed by stand replacing natural events (fire)	On Target	Annual	Annual	Annual	Page 24.
<u>Target 12</u>	Proportion of a natural disturbance event retained un-salvaged	Not Assessed (N/A)	Annual	5-Year	2023	Page 25.
<u>Target 13</u>	Yield curve suitability; measured by actual harvest volume (m ³ /ha) compared to predicted volume (2 parts)	Not Assessed (Monitor)	5-year	5-Year	2023	Page 26.
<u>Target 14</u>	Utilization assumption consistency and implementation	On Target	Annual	Annual	Annual	Page 28.
<u>Target 15</u>	Operational adherence to the Tactical Plan	Not Assessed (On Track)	Annual	5-Year	2023	Page 29.

Reporting Item	Description	Status (Parts)	Reporting Cycle	Assessment Cycle	Next Assessment Year	Location
<u>Target 16</u>	Harvesting activities in compliance with all related requirements	Not Assessed (Monitor)	Annual	5-Year	2023	Page 30.
<u>Target 17</u>	Crossing activities in compliance with all related requirements	Not Assessed (Monitor)	Annual	5-Year	2023	Page 31.
<u>Target 18</u>	Event Duration	Not Assessed (On Track)	Annual	5-Year	2023	Page 32.
<u>Target 19a</u>	Utilization of harvest volume schedule (HVS) (2 parts)	Not Assessed (On Track)	Annual	5-Year	2023	Page 33.
<u>Target 19b</u>	Harvest plans designed to lower wildfire risks to communities	Not Assessed (N/A)	Annual	5-Year	2023	Page 35.
<u>Target 20</u>	Stakeholder and public engagement (Public Advisory Group meetings)	On Target	Annual	Annual	Annual	Page 36.
<u>Target 21</u>	Spatially identified non-timber resources and forest use activities	On Target	Annual	Annual	Annual	Page 37.
<u>Target 22</u>	Harvest operations are proportionally distributed across the FMA (20 parts)	Not Assessed (On Track)	Annual	5-Year	2023	Page 38.
<u>Target 23</u>	Aboriginal community involvement in planning processes (10 parts)	Partially On Target (9/10)	Annual	Annual	Annual	Page 40.
<u>Target 24</u>	Spatial Identification and protection of culturally significant Heritage and Aboriginal sites	On Target	Annual	5-Year	2023	Page 41.
<u>Target 25</u>	Impacts of Climate Change on the Mistik FMP Area (2 Parts)	This target is a voluntary commitment not related to the FMP VOITs. It has no associated target and is included for monitoring purposes only				Page 42.
<u>Target 26a</u>	Contributions to Co-management Boards	Not Assessed (On Track)	Annual	5-Year	2023	Page 45.
<u>Target 26b</u>	% of total annual vendor / contractor payments made to local businesses	Not Assessed (On Track)	Annual	5-Year	2023	Page 46.
<u>Target 26c</u>	Percent of 'within-FMA area' communities represented in the workforce	Not Assessed (On Track)	Annual	5-Year	2023	Page 47.
<u>Target 27</u>	Stakeholder Engagement	On Target	Annual	Annual	Annual	Page 48.



- Large differences between age classes in 2019 and 2020 are largely caused by the aging of stands within the landbase rather than harvest, as stands are typically assigned an origin in the SFVI in an increment of 10 years (e.g., 1910, 1920, 1930, etc.), and these stands switch to the next age class also in years in increments of 10 (e.g., 2020).

Indicator #2a		Percent of the forest landbase that is old and very old										Status		Not Assessed (Monitor)	
Target #2a		Forest land base (managed forest landbase + eligible excluded forest) that is 'old' and 'very old' for the following six forest cover types: S-bS, S-jP, S-wS, SH, HS, and H, are maintained above the minimum thresholds of the 2 nd quartile of the natural range of variation for a 74-year fire cycle.										Reporting Cycle		Annual	
												Assessment Cycle		10-Year	
Old Forest & Very Old Forest										Very Old Forest					
															
<div><div>Target</div><div>Actual (On Target)</div><div>Actual (Off Target)</div></div>										<div><div>Target</div><div>Actual (On Target)</div><div>Actual (Off Target)</div></div>					
Age Class	Species Group	Year of Measurement										Current Status	Percent of Target	Target	
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028				
Old Forest & Very Old Forest (%)	S-bS	15.3	15.2									Assessment Year	15.2	305%	5.0
	S-jP	7.8	7.6										7.6	153%	5.0
	S-wS	27.0	26.6										26.6	296%	9.0
	SH/HS	9.3	9.0										9.0	90%	10.0
	H	16.6	15.8										15.8	113%	14.0
Very Old Forest (%)	S-bS	6.3	6.3										6.3	1,260%	0.5
	S-jP	1.7	1.8										1.8	350%	0.5
	S-wS	12.6	12.4										12.4	1,376%	0.9
	SH/HS	2.0	1.9										1.9	192%	1.0
	H	1.9	1.9										1.9	134%	1.4
Variance		No acceptable variance													
Comments		• “Old Forest” = older than 100 years (S-wS/jP/bS or SH), or 90 years (HS or H) / “Very Old Forest” = older than 120 years (all stands).													

Indicator #2b

Standard deviation of old forest area by management unit

Target #2b

The current standard deviation of old forest area among the 13 management units for each of the five forest cover types: S-bS, S-jP, S-wS, SH/HS, and H, associated with any level of old forest amount shall not deviate by more than 5% of the modeled linear relationship of the natural range of variation of standard deviations among management units for a specified old forest amount (and never below 2%). (No acceptable variance).

Status

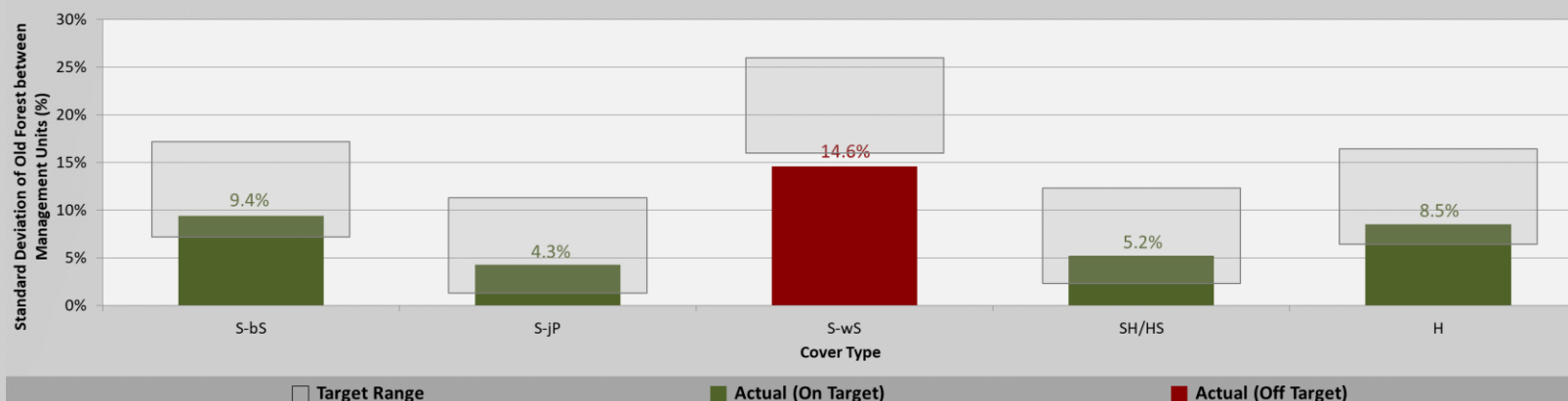
Not Assessed
(Monitor)

Reporting Cycle

Annual

Assessment Cycle

10-Year



Species Group	Year of Measurement										Current Status	Within Acceptable Range?	Target Range (%)
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
S-bS (%)	9.6	9.4									9.4	Yes	7.1 – 17.1
S-jP (%)	4.5	4.3									4.3	Yes	1.2 – 11.2
S-wS (%)	14.5	14.6									14.6	No	15.9 – 25.9
SH/HS (%)	5.2	5.2									5.2	Yes	2.2 – 12.2
H (%)	8.9	8.5									8.5	Yes	6.4 – 16.4
Variance	+/- 5% from the modelled standard deviation amount of old forest (See 'Target Range')												
Comments	<ul style="list-style-type: none"> “Old Forest” = older than 100 years (S-wS/jP/bS or SH), or 90 years (HS or H) This indicator reflects the distribution of old forest between management units. A standard deviation below target indicates that there are relatively equal amounts of old forest across management units, whereas a standard deviation above target indicates that old forest is clustered strongly in a few management units more than others. Targets for each species reflect an intermediate level of variation, based on the natural range of variation calculated for the Mistik FMA by Anderson (2006)¹. Note that targets change each year, based on the amount of old forest on the landscape. In 2020, the observed standard deviation for S-wS (white spruce) is less than the target range, indicating that the old forest for this species is more evenly distributed than targeted. However, this likely reflects the fact that there is also a much greater amount of old S-wS forest on the landscape than targeted (see target 2a), which may reduce the observed standard deviation if this excess of old forest is relatively equally distributed between management units. A map of the management units can be found in Appendix A. <p>¹Anderson, D. W. 2006. <i>Natural Levels of Forest Seral-Stage Variability on the Mistik Management FMA Area in Saskatchewan. Bandaloop Landscape-Ecosystems, Belcarra, British Columbia, Canada. 84 pp.</i></p>												

Indicator #3

Size class distribution of harvest events

Target #3

The targets for harvest distribution by event size class (based on a 10-year event measurement period) shall be within the acceptable range for each size class.

Status

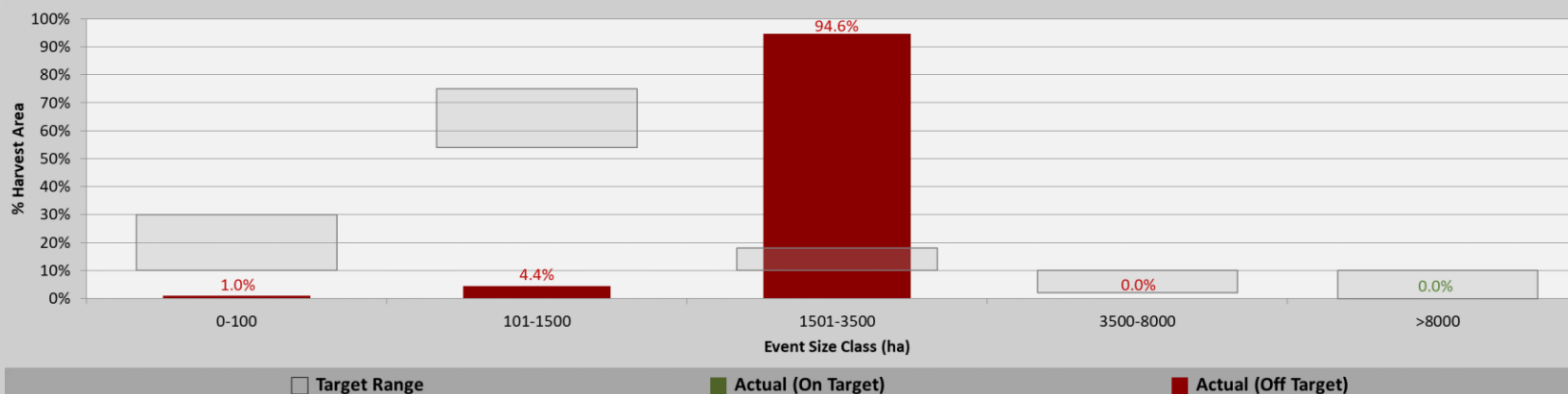
Not Assessed
(Monitor)

Reporting Cycle

5-Year

Assessment Cycle

10-Year



Event Size Class (ha)	Year of Measurement										Current Status	Within Acceptable Range?	Target Range
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
0-100 ha (%)	N/A	1.0%									1.0%	No	10 – 30%
101-1500 ha (%)	N/A	4.4%									4.6%	No	54 – 74%
1501-3500 ha (%)	N/A	94.6%									94.6%	No	10 – 18%
3500-8000 ha (%)	N/A	0%									0%	No	2 – 10%
>8000 ha (%)	N/A	0%									0%	Yes	0 – 10%

Variance

No acceptable variance outside of given range

Comments

- To determine harvest events, only blocks within a 10-year period (starting in 2019) are included*. Within the specified 10 years, blocks were buffered by 250m and blocks whose buffers overlapped were grouped together into an event. The outer boundaries of the combined buffers were buffered back inward by 250m and the resulting boundary is considered the event boundary. More information on this process and information on harvest events can be found in Appendix A, sections A6 and A7.
- Target is based on completed events only. Only harvest events completed in 2019 and after are considered.
- Only three events were completed in 2020 (TA252: 23.6 ha, TA249: 100.7 ha, and TA058: 2,172.1 ha). While these events represent a variety of size classes (therefore meeting the intent of this indicator, which is to achieve a variety of disturbance event sizes), due to the very limited number of events completed in this year it was not possible to achieve a precise distribution of harvest event sizes.



2020/21 ANNUAL REPORT

PROJECT #E-206
APRIL 2022

**Harvest under the current tactical plan from 2017 and 2018 has been included in event TA058, however this is an exception and normally only blocks harvested in the 2019/20 operating year or later are considered.*

Indicator #4

Tree retention after harvest

Target #4

For harvest events with >20 ha of harvest area, total retention will be an average of 9% made up of at least 4% in insular retention, including clumps (<2 ha), islands (>2 ha), and individual trees (in groups of 4 trees or less). The remainder will be made up of proximal retention (connected to the block boundary).

Status

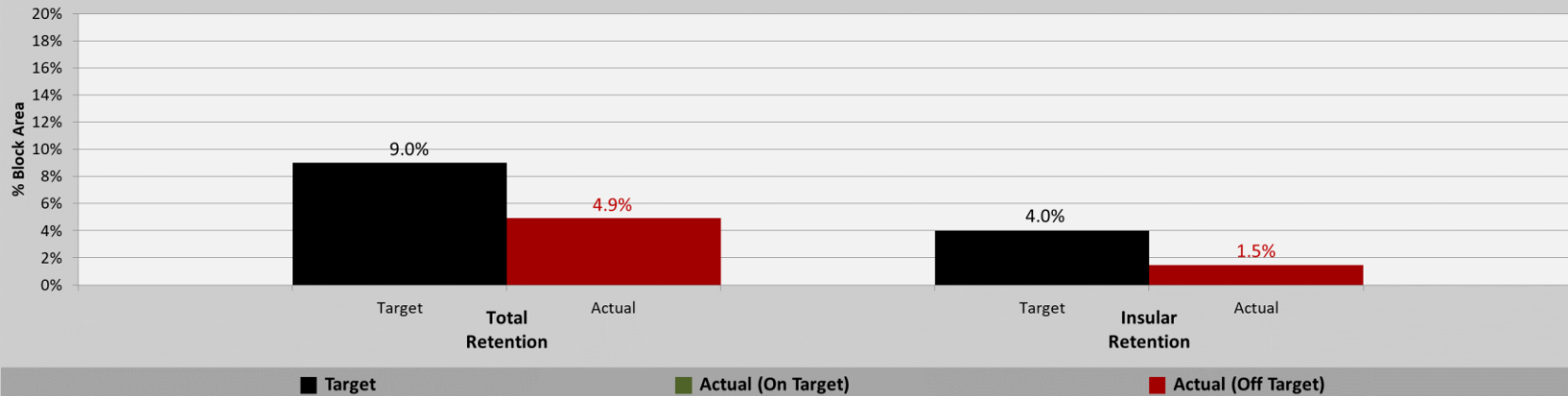
Not Assessed
(Monitor)

Reporting Cycle

Annual

Assessment Cycle

5-Year



Category	Year of Measurement										Current Status	Percent of Target	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
Total Retention (%)	N/A	4.9%			Assessment Year						4.9%	54%	9%
Insular Retention (%)	N/A	1.5%			Assessment Year						1.5%	38%	4%
Variance	No acceptable variance												
Comments	<ul style="list-style-type: none"> This target is based on completed events only. Only harvest events starting in 2019 and after are considered. Harvest event data can be found in Appendix A, sections A6 and A7. Only three events were completed in 2020. Note that the small clumps and single trees are not included in these measurements. Mistik recognizes that these numbers are lower than the targets and we will work with contractors and supervisors to ensure adequate retention is being left in harvest blocks and events. 												

Indicator #5

The softwood component in hardwood stands is maintained

Target #5

Hardwood stands with a white spruce component at the time of harvest will have an average of a minimum of 200 stems/ha of white spruce when measured in an Establishment survey (early FTG) or FTG survey.

Status

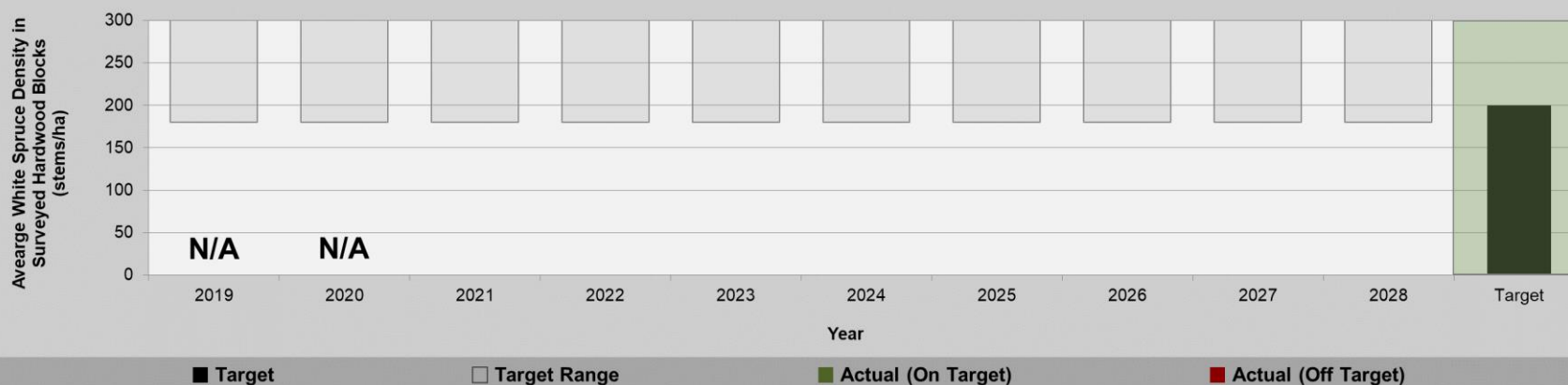
Not Assessed (N/A)

Reporting Cycle

Annual

Assessment Cycle

5-Year



Category	Year of Measurement										Current Status	Within Acceptable Range?	Target Range
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
Area (ha) harvested in Hardwood Stands with WS component	635	722			Assessment Year					Assessment Year	722	N/A	N/A
Average WS Density in Target Hardwood Stands (stems/ha)	N/A	N/A			Assessment Year					Assessment Year	N/A	N/A	≥180
Variance	Acceptable variance is -10%, with no upper bound (target range: greater than or equal to 180 stems/ha)												
Comments	<ul style="list-style-type: none"> The population of harvest areas that this target applies to will be those portions of harvest blocks that had a pre-harvest species group of H (80% or greater hardwood component) and a white spruce component (at least 10% cover of WS in the overstorey or at least 20% cover of WS in the understorey layer of the SFVI). Only blocks harvested after April 1, 2019, will be assessed. Early FTG survey results for blocks harvested after April 1, 2019, are not expected until 2024 at the earliest. Softwood component in hardwood stands is maintained using a number of different methods. In blocks that are predominantly mixedwood, smaller hardwood stands may be planted if adjacent stands are either mixedwood or softwood leading. In hardwood leading blocks (where no planting is done), either understorey protection of the spruce is implemented during harvesting or in-block roads may be planted once they are reclaimed to add a softwood component back into the block. The definition of "hardwood stands with a white spruce component" has been updated to include only stands with a final development type of H ('dt_spgp' = 'H') to better align with Mistik's FMP landbase (previously, any stand with an H-dominant understorey was included, even if the stand had a final development type different than this, for instance stands where the understorey was used to assign the final development type). The area of this 												

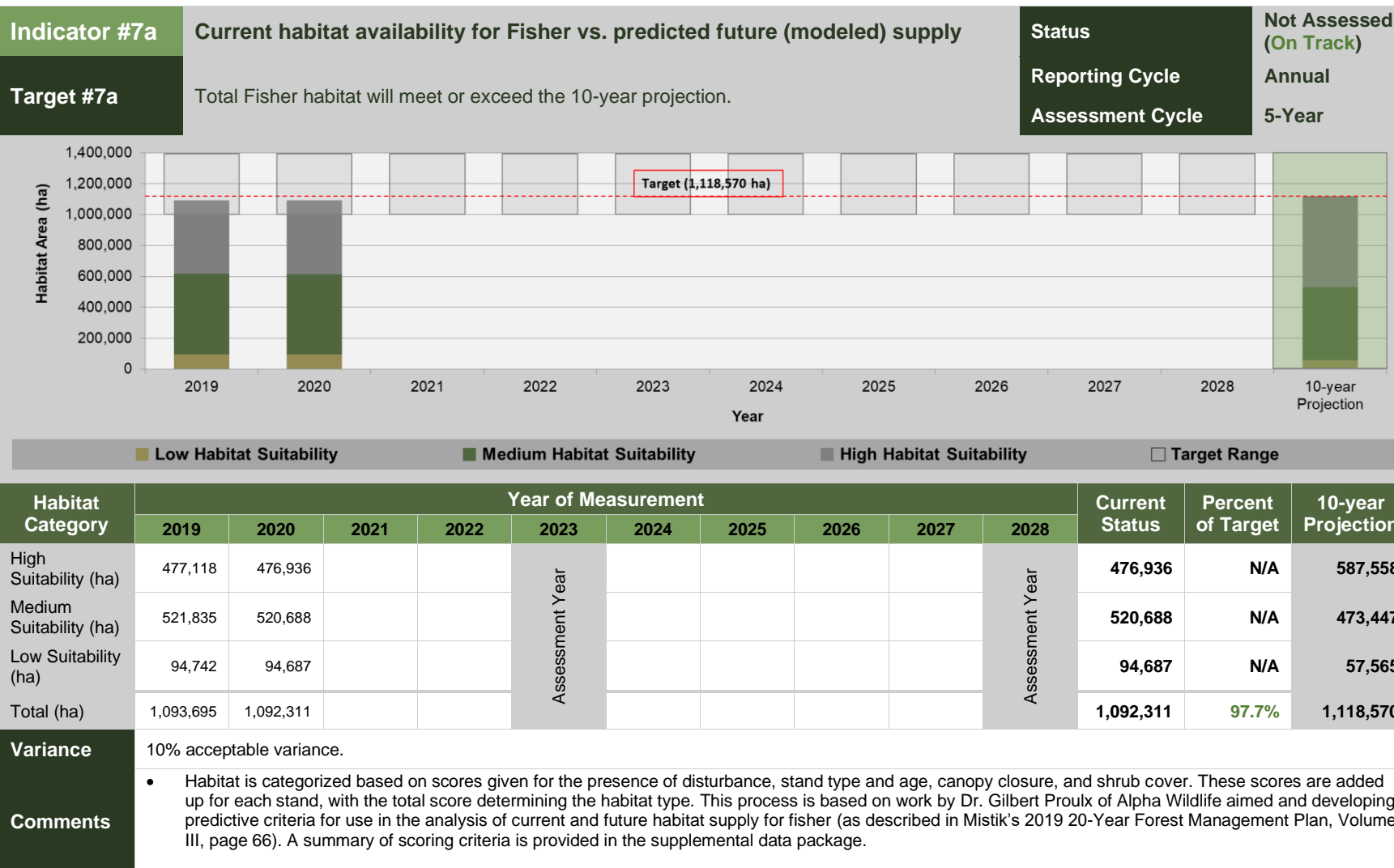


2020/21 ANNUAL REPORT

PROJECT #E-206
APRIL 2022

indicator has been updated for 2019 using this new definition and therefore the numbers presented for 2019 may not align with previous annual reports.

Indicator #6		Relative abundance of SGR Forest Types are forecasted to be maintained at next rotation									Status		Not Assessed (Monitor)		
Target #6		The area by stand type of regenerating stands, as measured at the Free to Grow survey, will be consistent with the transition assumptions used in the Forest Estate Modeling.									Reporting Cycle		Annual		
											Assessment Cycle		5-Year		
<div><div>Area (ha)</div><div><div><div><div><div><div></div><div>436</div></div><div><div>39</div></div></div><div><div>106</div><div>0</div></div><div><div>1,692</div><div>1,925</div></div><div><div>312</div><div>668</div></div><div><div>819</div><div>1,494</div></div><div><div>809</div><div>819</div></div><div><div>83</div><div>103</div></div><div><div>1,048</div><div>268</div></div></div><div><div>■ Target</div><div>■ Actual - On Target</div><div>■ Actual - Off Target</div></div></div><div><div>S-wS</div><div>S-bS</div><div>S-jP</div><div>SH-jP</div><div>SH-wS</div><div>HS-wS</div><div>HS-jP</div><div>H</div></div></div></div>															
SGR Forest Types (Predicted Area)		Year of Measurement										Current Status	Percent of Target	Target	
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028				
S-wS (ha)		527.9	39.2			Assessment Year						39.2	9%	436.5	
S-bS (ha)		0.0	0.0										0.0	0%	106.1
S-jP (ha)		995.3	1,924.8										1,924.8	114%	1,692.2
SH-jP (ha)		276.0	668.1										668.1	214%	312.1
SH-wS (ha)		3,283.7	1,494.1										1,494.1	183%	819.4
HS-wS (ha)		215.9	818.6										818.6	101%	809.0
HS-jP (ha)		81.0	102.6										102.6	124%	83.1
H (ha)		1,114.2	267.9										267.9	26%	1,048.1
Variance		+/- 10% of target area for each species group.													
Comments		<ul style="list-style-type: none">All Free-to-Grow surveys completed in 2020 were performed aerially as per Government of Saskatchewan standards. The SGR Forest Types assigned to these surveys represent the predicted status at a stand age of 100 years, based on successional trajectories modelled by Gelhorn, L. (2009)¹. Note that these results represent only a single year of survey data, and that these successional trajectories were modelled using a limited dataset and may not accurately represent future stand status. In the long-term, the potential for developing a more accurate model of stand successional trajectories, using a wider representation of available survey data, will be explored. <div>¹Gelhorn, L. 2009. Development of a Regenerating Mixedwood Succession Matrix. Timberline Natural Resource Group Ltd., Prince Albert, Saskatchewan, Canada</div>													



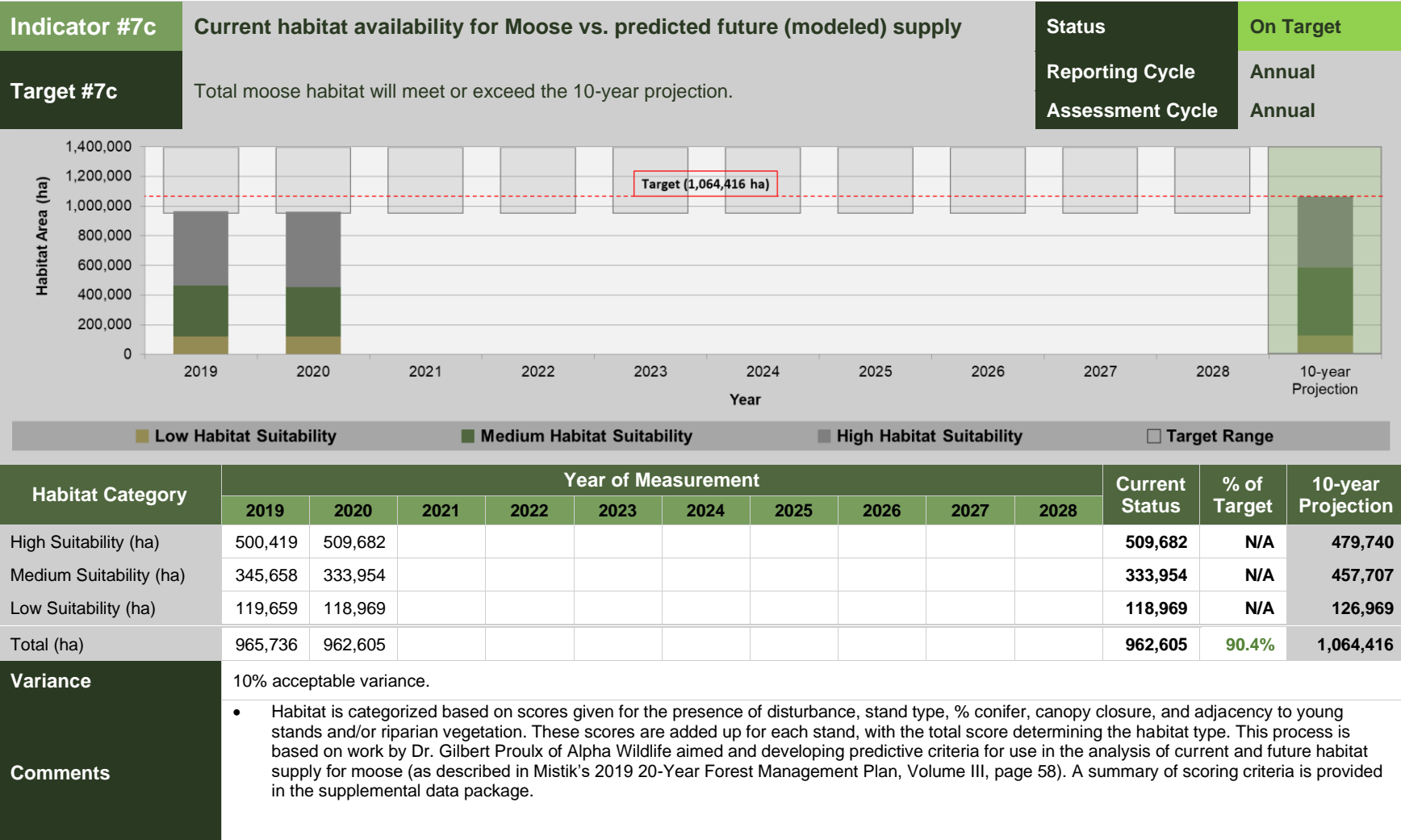
Indicator #7b	Part 1: Habitat availability for Caribou – CM-1, CM-2, & CM-4	Status	On Target (2/2)
Target #7b	No new timber harvesting or related activities will be planned for Mistik Caribou Habitat Management (CM) areas CM-1, CM-2, or CM-4 in the next 10 years. Mistik-caused disturbance in each CM area will be less-than or equal to the current disturbance percentage.	Reporting Cycle	Annual
		Assessment Cycle	Annual
Part 1 – CM-1 / CM-2 / CM-4			
<div><div>New Area Harvested (ha)</div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div></div></div>			

Indicator #7b	Part 2: Habitat availability for Caribou – CM-1a, CM-2a	Status	On Target (2/2)
Target #7b	All harvest-related activities in CM-1a and CM-2a areas will follow “least-impact” forestry practices identified in the Woodland Caribou Habitat Mitigation Plan.	Reporting Cycle	Annual
		Assessment Cycle	Annual

Part 2 – CM-1a / CM-2a



New Harvest, by Caribou Habitat Management Area	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
CM-1a Area Harvested (ha)	0	0									0	N/A
CM-2a Area Harvested (ha)	0	0									0	N/A
CM-1a Blocks (blk. numbers)	N/A	N/A									N/A	N/A
CM-2a Blocks (blk. numbers)	N/A	N/A									N/A	N/A
CM-1a (% Blocks, by Area, Meeting “Least-Impact” Practices)	N/A	N/A									N/A	100%
CM-2a (% Blocks, by Area, Meeting “Least-Impact” Practices)	N/A	N/A									N/A	100%
Variance	2% acceptable variance.											
Comments	<ul style="list-style-type: none"> “Least-impact” forestry practices includes block designs that follow natural forest pattern principles, winter harvest, temporary/minimal access construction, road reclamation within 1 year of harvest/haul completion, renewal activities within 1 year of harvest, no activity between March 1 – June 1. At this time, there is no previous harvest with outstanding requirements in these areas. Any variance reported in the table above, if any, is related to new harvest under the 2019 FMP. There was no harvest in CM-1a or CM-2a in 2020. 											



Indicator #8

Seedlings are from wild or improved seed sources

Status

**Not Assessed
(On Track)**

Target #8

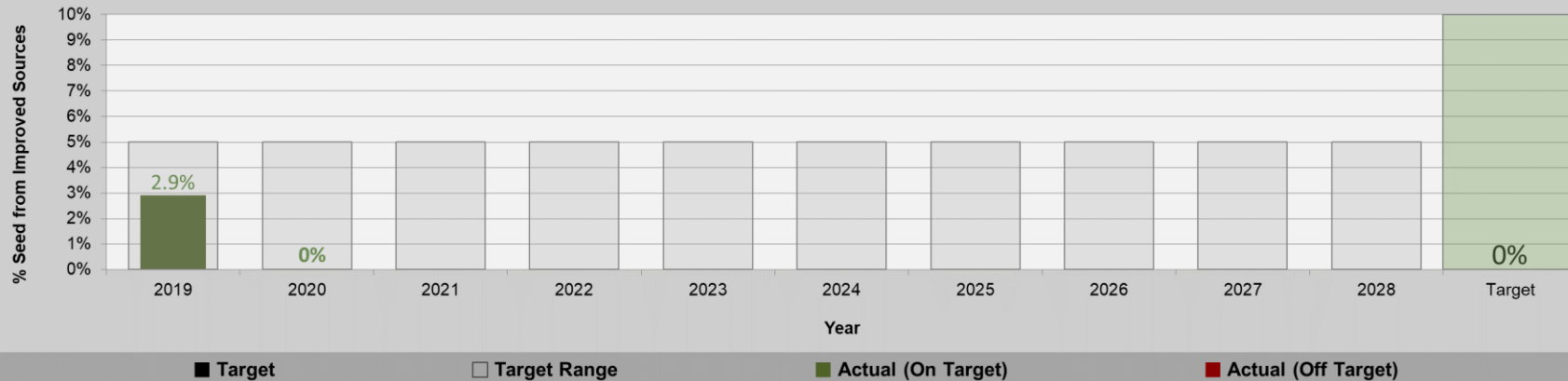
No tree seedlings planted on the Mistik FMP area shall be from 'improved' seed sources.

Reporting Cycle

Annual

Assessment Cycle

5-Year



Category	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Trees Planted (Improved Seed)	22,680	0			Assessment Year						0	N/A
Total Trees Planted	784,320	1,100,650									1,100,650	N/A
% Seed from Improved Sources	2.9%	0%									0%	0%
Variance	5% acceptable variance											
Comments	<ul style="list-style-type: none">Mistik received approval in 2019 to utilize seedlings grown from Alberta seed lot sources. One of these seed lots had been improved, however none were genetically modified. Seed lots were located parallel to the Mistik FMA and are expected to be suitable for growing conditions in Mistik’s FMA. This seed was used to grow 2.9% of seedlings planted in 2019.No trees from improved seed were planted in 2020.Discussion is ongoing in order to refine the definition of “improved seed” for the purposes of this target. The use of improved stock via selective tree breeding and improvement programs is considered positive; the concerns of this indicator refer more to “artificially” improved stock such as GMOs. This target may be revised in the future to consider only GMOs or other artificially improved stock.											

Indicator #9

Post-harvest areas are successfully regenerated

Target #9

100% of surveyed post-harvest area shall meet provincial stocking requirements according to the provincial Regeneration Assessment Standard (Establishment and Free to Grow surveys).

Status

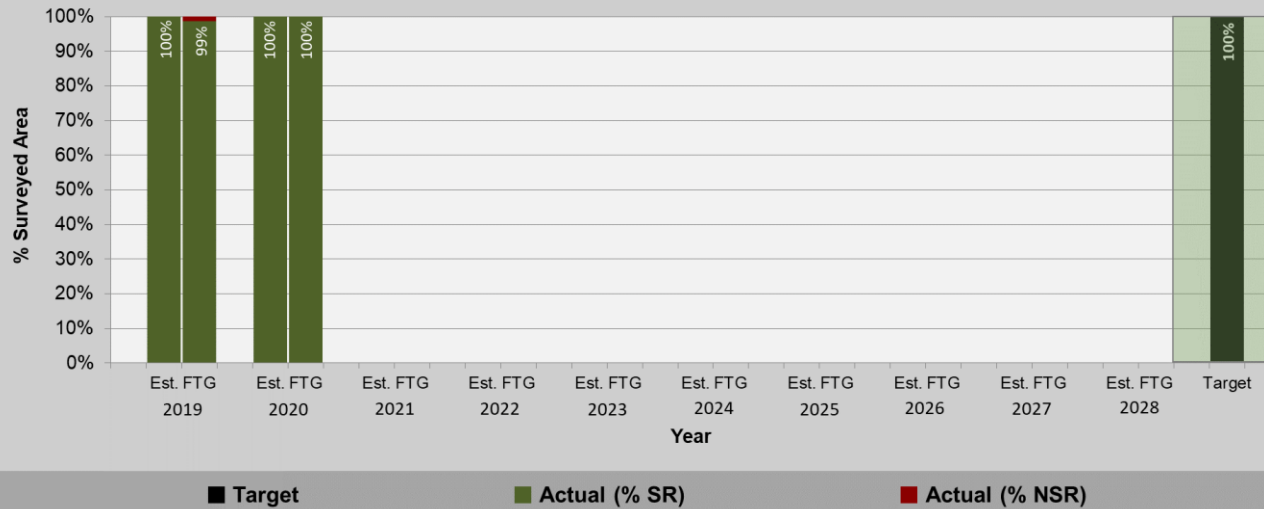
Not Assessed
(On Track)

Reporting Cycle

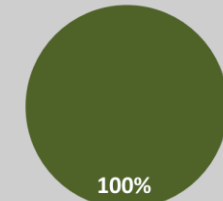
Annual

Assessment Cycle

5-Year

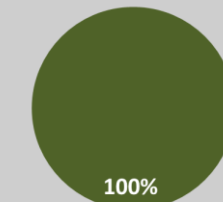


Current – Est. Surveys



% SR % NSR

Current – FTG Surveys



% SR % NSR

Survey Type	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Establishment Surveys (% ha SR)	100.0%	100.0%			Assessment Year					Assessment Year	100.0%	100%
Free-To-Grow Surveys (% ha SR)	98.7%	100.0%										100.0%
Variance	No acceptable variance.											
Comments	<ul style="list-style-type: none">Surveys reported are those that are completed in each respective year, regardless of year of harvest.All NSR blocks are tracked and an action plan is developed to ensure full stocking of all NSR blocks.Note that there was a portion of one block (01017038) in 2020 that was noted as non-productive (flooded) and cannot be treated. This area represented 24.3 ha (7.6%) of the block (321.3 ha) and has not been included in the SR % above.											

Indicator #10

Change in the managed forest landbase area

Target #10

Less than 2% of the productive forest land base shall be converted to permanent or currently not reclaimed Mistik- and L&M-related access structures (roads and gravel / borrow pits).

Status

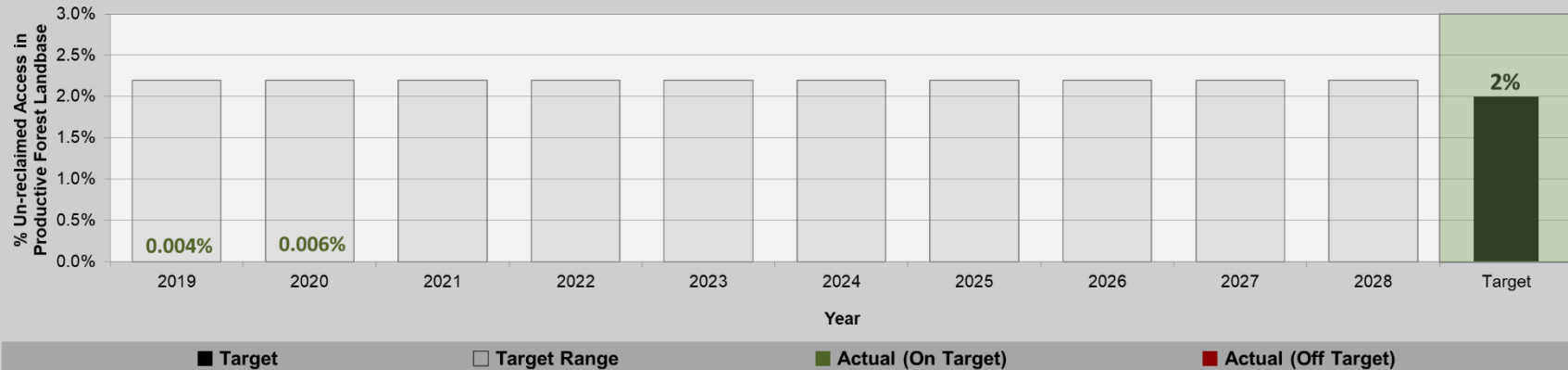
Not Assessed
(On Track)

Reporting Cycle

Annual

Assessment Cycle

5-Year



Category	Year of Measurement										Current Status	Target	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
% Productive Forest Landbase Converted	0.004%	0.006%			Assessment Year					Assessment Year	0.006%	2%	
Total Permanent Road Added (km)	4.5	6.4										6.4	N/A
Contributing Area Converted (Roads) (ha)	31.1	49.3										49.3	N/A
Contributing Area Converted (Gravel/Borrow Pits) (ha)	0	0										0	N/A
Variance	2% disturbance is the target maximum, but maximum acceptable variance is 10% (i.e., less than 2.2% disturbance)												
Comments	<ul style="list-style-type: none">Only permanent (Class 1 or Class 2) roads are considered and a total right-of-way width of 80m (40m buffer from centerline) is used for both Class 1 and Class 2 roads. Note that the maximum right-of-way width as per the Forest Operations Standard is 40m total. All values will be corrected in future reports.Note that the contributing area converted is less than the total right-of-way area due to the fact that only part of the area covered by these roads is considered contributing.Construction on two class 2 roads occurred in 2020: 9 Mile Pine Road and Gold Lake IBR.												

Indicator #11

Net area disturbed by stand replacing natural events (fire)

Status

On Target

Target #11

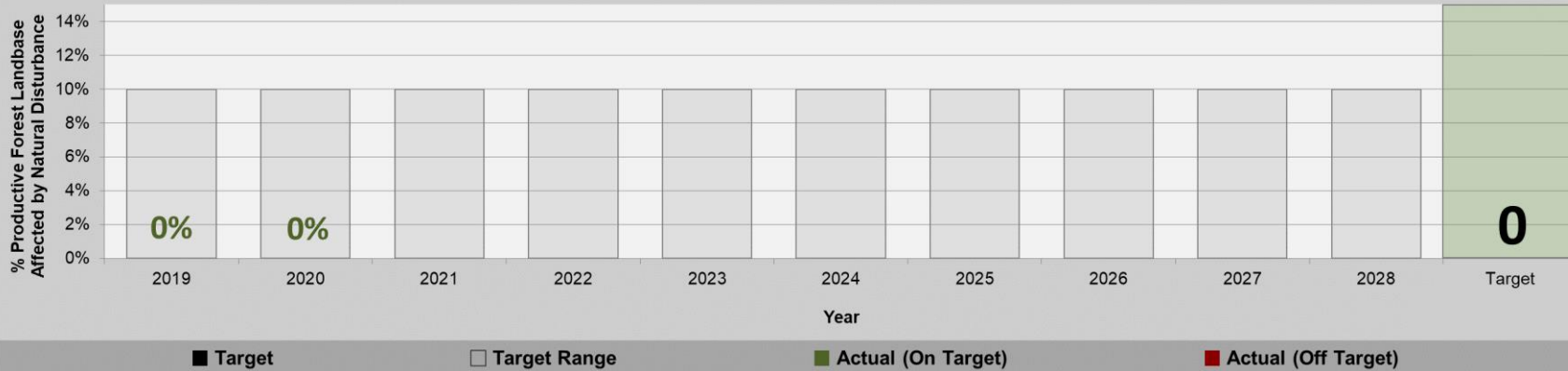
Net area impacted by stand replacing natural disturbance (fire) will be monitored against a threshold of 10% over the 10-year period, above which re-evaluation of the FMP would need to occur.

Reporting Cycle

Annual

Assessment Cycle

Annual



Category	Year of Measurement										Current Status	Cumulative Percent	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
% Disturbance - Fire	0%	0%									0%	0%	0%
Variance	0% disturbance is the target, but maximum acceptable variance is 10% disturbance. <ul style="list-style-type: none"> Based on fire data provided by the Ministry of Environment There were no fires on the Mistik FMA in 2020. 												
Comments													

Indicator #12

Proportion of a natural disturbance event retained un-salvaged

Target #12

In all salvage harvesting activities occurring in natural disturbance events >100 ha, at least 20% of the disturbance area will be left unharvested.

Status

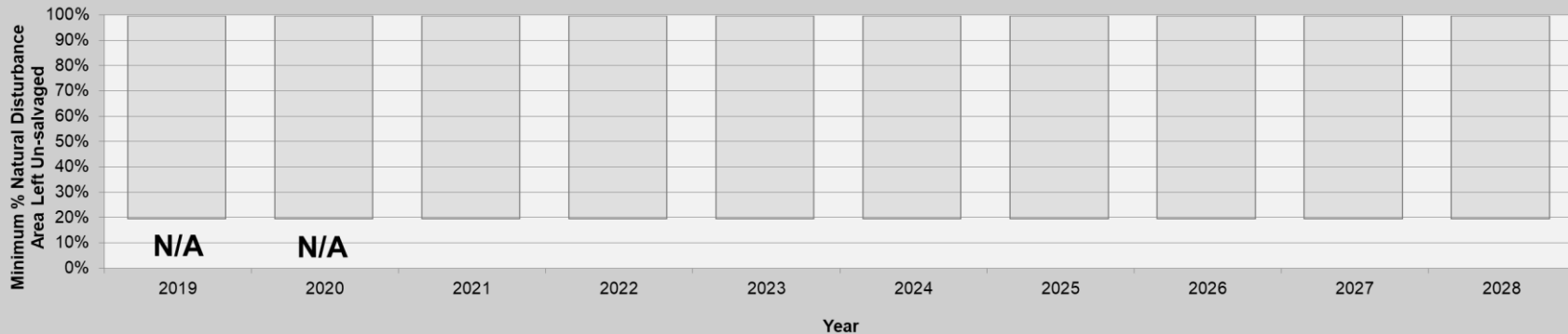
Not Assessed
(N/A)

Reporting Cycle

Annual

Assessment Cycle

5-Year



□ Target Range

■ Actual (On Target)

■ Actual (Off Target)

Category	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
# of Salvage Events	0	0			Assessment Year						0	N/A
Total Area of Disturbance Events (ha)	0	0									0	N/A
Salvage Area in Disturbance Events (ha)	0	0									0	N/A
Minimum % Disturbance Area Left Un-salvaged	N/A	N/A									N/A	20%

Variance

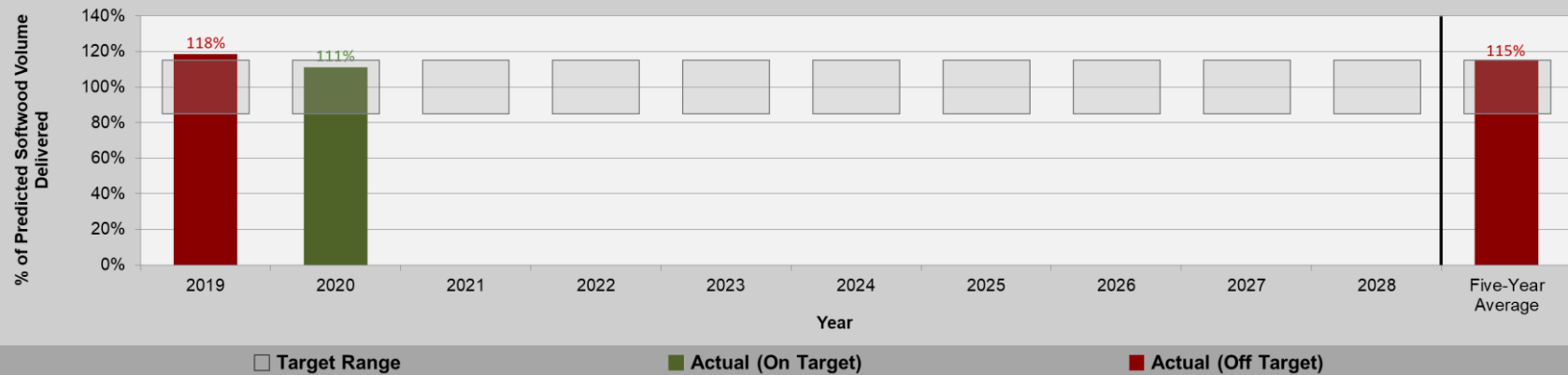
Acceptable range is $\geq 20\%$ and $<100\%$

Comments

- This target only includes disturbance events where salvage operations occurred.
- There was no salvage on the Mistik or L&M FMA in 2019 or 2020.

Indicator #13	Yield curve suitability; measured by actual harvest volume (m³/ha) compared to predicted volume	Status	Not Assessed (Monitor)
Target #13	On an annual and five-year basis and based on updated harvest block boundaries, the total actual delivered softwood and hardwood harvest volume from all sources on the FMA area shall deviate by less than the acceptable variance (15% on a five-year basis) from the volume predicted by the yield curve estimates for the same harvested forest stands.	Reporting Cycle	5-Year
		Assessment Cycle	5-Year

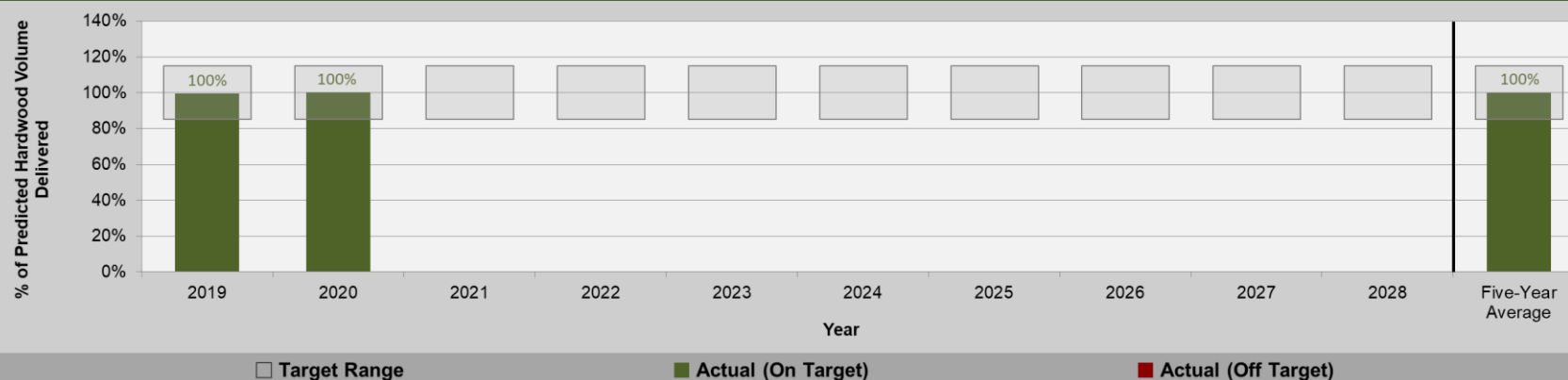
Part 1 – Softwood



Category	Year of Measurement										Five-Year Average	Target	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
Predicted Volume (m³)	189,652	154,869			Assessment Year					Assessment Year	172,260	N/A	
Delivered Volume (m³)	224,451	172,338										198,395	N/A
Delivered Volume (% Predicted)	118.3%	111.3%										115.2%	100%
Variance	+/-15% acceptable variance.												
Comments	<ul style="list-style-type: none">Differences between predicted and delivered volumes are likely due to a relatively old forest inventory (based on imagery acquired between 1994-2005) being used for these estimates. While there is an upper bound on this target, it should be noted that delivering more volume than predicted is positive as it means that less area needs to be harvested to meet wood supply requirements.Volume from one block in 2020 (08009038) has not yet been hauled/scaled at the time of this report and as such an estimated volume was used for this block.Block 01049025 in 2020 was not included in these numbers as this block was harvested by a third party operator.												

Indicator #13	Yield curve suitability; measured by actual harvest volume (m³/ha) compared to predicted volume	Status	Not Assessed (Monitor)
Target #13	On an annual and five-year basis and based on updated harvest block boundaries, the total actual delivered softwood and hardwood harvest volume from all sources on the FMA area shall deviate by less than the acceptable variance (15% on a five-year basis) from the volume predicted by the yield curve estimates for the same harvested forest stands.	Reporting Cycle	5-Year
		Assessment Cycle	5-Year

Part 2 – Hardwood



Category	Year of Measurement										Five-Year Average	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Predicted Volume (m³)	455,878	451,366			Assessment Year						453,622	N/A
Delivered Volume (m³)	454,730	453,205									453,968	N/A
Delivered Volume (% Predicted)	99.7%	100.4%									100.1%	100%
Variance	+/-15% acceptable variance.											
Comments	<ul style="list-style-type: none">Volume from one block in 2020 (08009038) has not yet been hauled/scaled at the time of this report and as such an estimated volume was used for this block.Block 01049025 in 2020 was not included in these numbers as this block was harvested by a third-party operator.											

Indicator #14	Utilization assumption consistency and implementation										Status	On Target
Target #14	There shall be 0 Notices of Violation or Administrative Penalties for operators not meeting the current or otherwise approved utilization specifications.										Reporting Cycle	Annual
											Assessment Cycle	Annual
<div><div>Number of NOV's/Penalties</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>0123</div><div>2019202020212022202320242025202620272028</div><div>Year</div><div>■ Target■ Actual (On Target)■ Actual (Off Target)</div></div></div>												0
Category	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
NOV's / Penalties	0	0									0	0
Variance	No acceptable variance.											
Comments	<ul style="list-style-type: none">No notices of violation or administrative penalties were issued in 2020/21 for not following approved utilization specifications.As part of ongoing harvest supervision, Mistik does weekly inspections on all contractors to ensure that they are following the approved utilization specifications.For additional information on regulatory compliance, see section 5.2.4.											

Indicator #15

Operational adherence to the Tactical Plan

Status

Not Assessed
(On Track)

Target #15

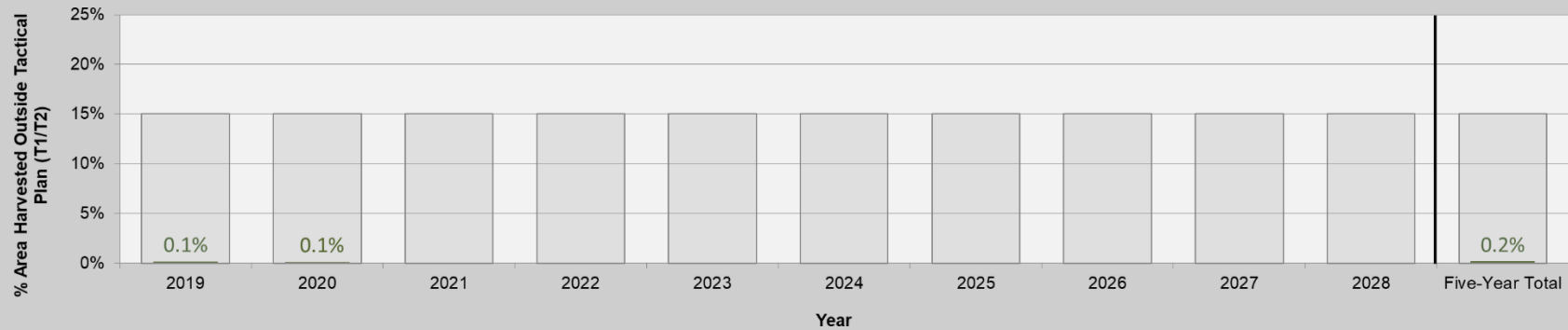
Over the 10-year period, the area harvested outside of the Tactical Plan (T1 and T2 combined) will not exceed 15% of the total Tactical Plan area.

Reporting Cycle

Annual

Assessment Cycle

5-Year



□ Target Range

■ Actual (On Target)

■ Actual (Off Target)

Category	Year of Measurement										Five-Year Total	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Total Area Harvested Outside of T1/T2 (ha)	372	200			Assessment Year					Assessment Year	572	37,347
% Total Area Harvested Outside of T1/T2	0.1%	0.1%			Assessment Year					Assessment Year	0.2%	15%

Variance

Acceptable range is 0% - 15%.

Comments

- Total Tactical Plan area (T1 + T2) = 248,979 ha. Maximum target area harvested outside of the Tactical Plan is (248,979 ha * 0.15) = 37,347 ha.
- In some areas, not all operable stands have been included in the tactical plan due to the coarse-scale nature of that level of planning. These stands are often harvested in conjunction with tactical plan blocks so that merchantable wood is not left isolated.

Indicator #16	Harvesting activities in compliance with all related requirements							Status	Not Assessed (Monitor)	
Target #16	100% of harvesting activities are in compliance with provincial and federal acts & regulations, approved operating plans, and SK Environmental Code.							Reporting Cycle	Annual	
								Assessment Cycle	5-Year	
Category	Year of Measurement									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
All Harvesting Activities in Compliance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2020 Compliance Summary										
Category	Mistik Inspection Data		Ministry Identified Non-Compliances (Enforcement Action Taken)							
	# of Inspections	# In Compliance	Total Items Non-Compliant	No Action Taken	Voluntary Compliance Opportunity	Notice of Violation	Stop Work Order	Administrative Penalty		
Harvesting Activities	160	156	12	3	3	6	0	1		
Variance	No acceptable variance.									
Comments	<ul style="list-style-type: none">A total of 12 non-compliances were identified by the ministry related to harvesting in 2020/21.Three voluntary compliance opportunities were given related to a trespass on an old seismic line (1) and slash management (2).Six notices of violation were given related to a small trespass through an old harvest block (1), slash abatement (1), notification of temporary work camp (1) and a riparian trespass (3 given for this incident). One of the incidents related to slash management resulted in both a VCO and a NOV.An administrative penalty was given related to rutting.Three incidents resulted in no further enforcement action taken.Mistik conducted a total of 160 harvest inspections in 2020/21 and in 156 instances, harvesting activities were found to be in compliance.For additional information on regulatory compliance see section 5.2.4									

Indicator #17	Crossing activities in compliance with all related requirements							Status	Not Assessed (Monitor)	
Target #17	100% of watercourse crossings are in compliance with provincial & federal acts / regulations / approved operating plans /SK Environmental Code and aquatic habitat protection permits (AHPP).							Reporting Cycle	Annual	
								Assessment Cycle	5-Year	
Category	Year of Measurement									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
All Watercourse Crossings in Compliance	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
2020 Compliance Summary										
Category	Mistik Inspection Data		Ministry Identified Non-Compliances (Enforcement Action Taken)							
	# of Inspections	# In Compliance	Total Items Non-Compliant	No Action Taken	Voluntary Compliance Opportunity	Notice of Violation	Stop Work Order	Administrative Penalty		
Watercourse Crossings	66	65	5	1	0	4	0	0		
Variance	No acceptable variance.									
Comments	<div><ul style="list-style-type: none">A total of 5 non-compliances were identified by the ministry related to watercourse crossings in 2020/21.Four notices of violation were given related to two crossings.One incident resulted in no further enforcement action taken.Mistik conducted a total of 66 watercourse crossing inspections in 2020/21 and in 65 instances, harvesting activities were found to be in compliance.For additional information on regulatory compliance see section 5.2.4.</div>									

Indicator #18

Event Duration

Target #18

100% of harvest events have a duration of 10 years or less.

Status

Not Assessed
(On Track)

Reporting Cycle

Annual

Assessment Cycle

5-Year



Category	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Completed Harvest Events	N/A	3			Assessment Year					Assessment Year	3	N/A
% of Completed Harvest Events with >10-year Duration	N/A	100%			Assessment Year					Assessment Year	100%	100%

Variance

No acceptable variance.

Comments

- This target is based on completed events only. Only harvest events starting in 2019 and after are considered.
- There were no completed events in 2019.
- Harvest event data, including a list of events initiated in 2019/20 and 2020/21, can be found in Appendix A, Sections A6 and A7.

Indicator #19a

Utilization of harvest volume schedule (HVS)

Target #19a

The annual average harvest (based on a five-year period) shall not exceed the approved HVS for softwood or hardwood.

Status

Not Assessed
(On Track)

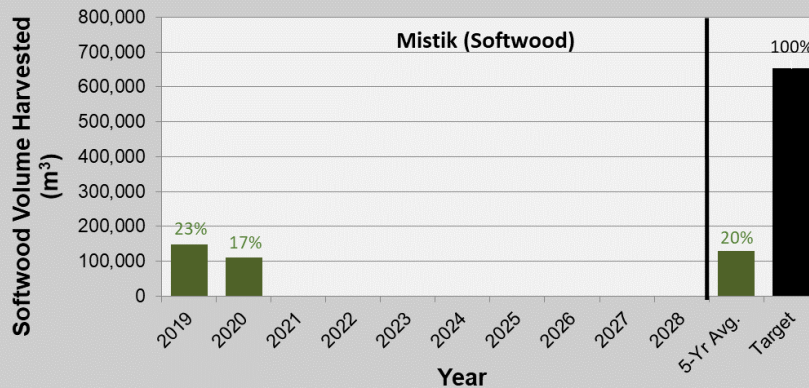
Reporting Cycle

Annual

Assessment Cycle

5-Year

Part 1 – Softwood



■ Target ■ Actual (On Target) ■ Actual (Off Target)

■ Target ■ Actual (On Target) ■ Actual (Off Target)

Category	Year of Measurement										Five-Year Average	2019 FMP HVS
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Softwood Volume Harvested (m³) – Mistik	148,778	110,367			Assessment Year					Assessment Year	129,572	652,906
Softwood Volume Harvested (m³) – L&M	75,673	61,971										68,822
Variance	No acceptable variance.											
Comments	<ul style="list-style-type: none">Volume from one block in 2020 (08009038) has not yet been hauled/scaled at the time of this report and as such an estimated volume was used for this block.Block 01049025 in 2020 was not included in these numbers as this block was harvested by a third party operator.											

Indicator #19a Utilization of harvest volume schedule (HVS)

Target #19a

The annual average harvest (based on a five-year period) shall not exceed the approved HVS for softwood or hardwood.

Status

Not Assessed
(On Track)

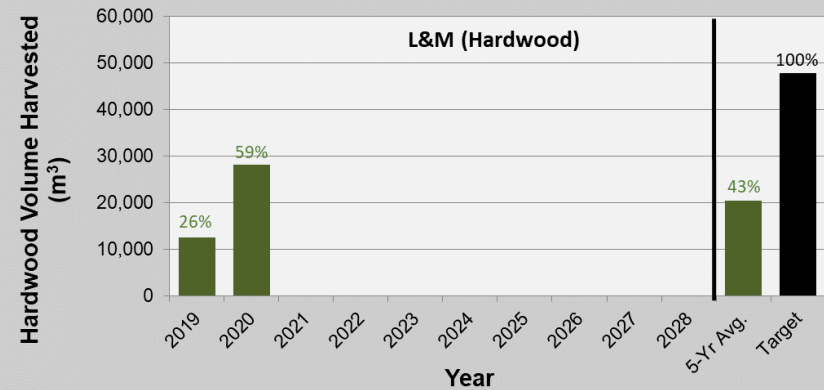
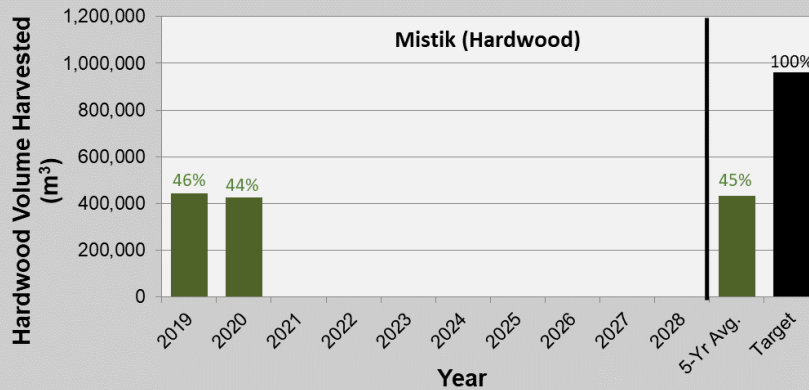
Reporting Cycle

Annual

Assessment Cycle

5-Year

Part 2 – Hardwood



■ Target ■ Actual (On Target) ■ Actual (Off Target)

■ Target ■ Actual (On Target) ■ Actual (Off Target)

Category	Year of Measurement										Five-Year Average	2019 FMP HVS
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Hardwood Volume Harvested (m³) – Mistik	442,072	424,941			Assessment Year					Assessment Year	433,506	959,763
Hardwood Volume Harvested (m³) – L&M	12,659	28,265										20,462
Variance	No acceptable variance.											
Comments	<ul style="list-style-type: none">Volume from one block in 2020 (08009038) has not yet been hauled/scaled at the time of this report and as such an estimated volume was used for this block.Block 01049025 in 2020 was not included in these numbers as this block was harvested by a third-party operator.											

Indicator #19b

Harvest plans designed to lower wildfire risks to communities

Target #19b

Work with MOE on 100% of community wildfire risks as identified by and requested by the Saskatchewan Public Safety Agency (SPSA) or within-FMA communities.

Status

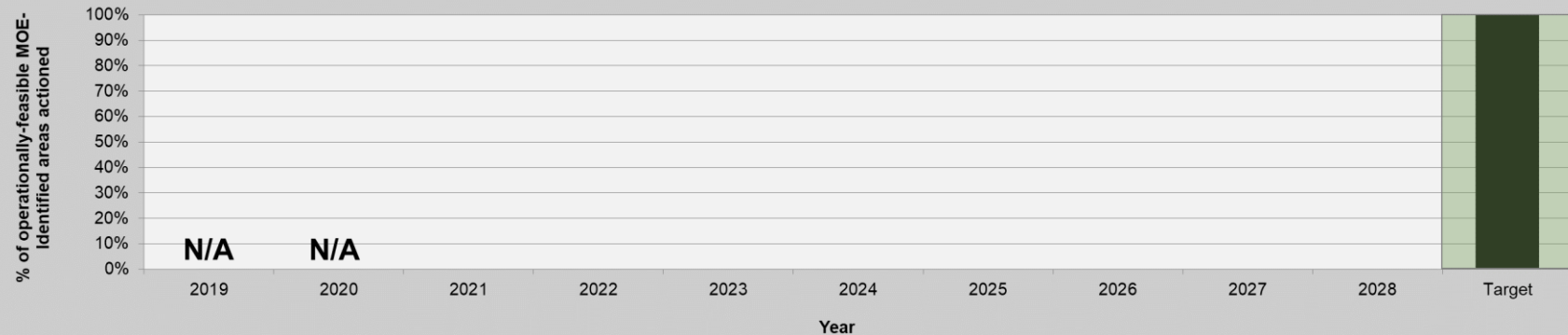
Not Assessed
(N/A)

Reporting Cycle

Annual

Assessment Cycle

5-Year



■ Target

■ Actual (On Target)

■ Actual (Off Target)

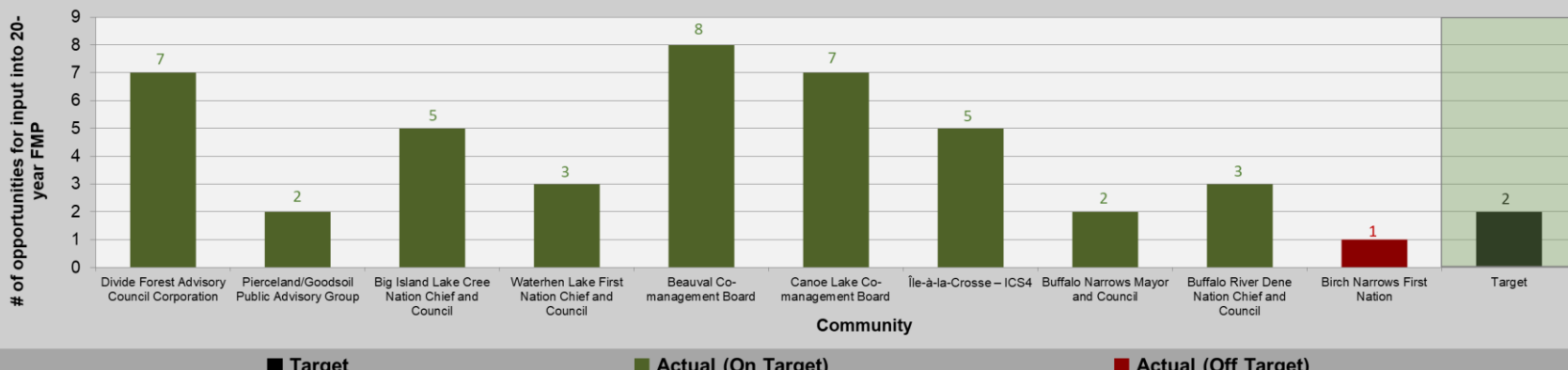
Category	Year of Measurement										Current Status	Target	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
Number of Areas Identified and Requested by SPSA	0	0			Assessment Year					Assessment Year	0	N/A	
Number of Areas Actioned	0	0										0	N/A
% Areas Actioned	N/A	N/A										N/A	100%
Variance	Economic feasibility and merchantability are the key criteria when determining if fuel reduction projects can be undertaken. Operators will not be expected to harvest areas that do not meet these criteria.												
Comments	<ul style="list-style-type: none">There were no requests for fuel reduction-type projects in 2019 or 2020 by SPSA or the communities.												

Indicator #20	Stakeholder and public engagement (Public Advisory Group meetings)	Status	On Target
Target #20	Organize a minimum of 2 public engagement meetings (e.g., PAG meetings) annually.	Reporting Cycle	Annual
		Assessment Cycle	Annual
<div><div><div><div><div></div><div>PAG Meetings Held</div></div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><</div></div></div></div></div></div>			

Indicator #21	Spatially identified non-timber resources and forest use activities									Status	On Target
Target #21	On an annual basis, acquire and input into GIS 100% of all known 'special places', non-timber resources and non-timber forest-use activities and produce a thematic map product which can be produced as a single theme or in combination with other map products.									Reporting Cycle	Annual
										Assessment Cycle	Annual
Category	Year of Measurement										
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Number of New Additions	0	0									
Map Produced?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Variance	No acceptable variance.										
Comments	<ul style="list-style-type: none"> • "Special Places" includes areas of public concern, rare wildlife, traditional use areas, unique landforms, visually sensitive areas, and archaeological/heritage sites. • Mistik was made aware of 4 new heritage sites in 2019. These have been reported in Indicator #24 and have not been included here. • No new sites were identified in 2020. • See attached Special Places map. 										

Indicator #22		Harvest operations are proportionally distributed across the FMA										Status		Not Assessed (On Track)		
Target #22		Harvest area by species grouping and Planning Unit will not exceed 50% of the 10-year Forest Estate Modeling outputs in either of the first two 5-year periods.										Reporting Cycle		Annual		
												Assessment Cycle		5-Year		
Planning Unit	Species Group	Year of Measurement										5-Year Total	% of Target	Target (5-year)	Target (10-year)	
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028					
North	H/HS (ha)	0	0			Assessment Year						0	0%	2,754	5,508	
	SH (ha)	0	0									0	0%	414	828	
	S-WS (ha)	0	0									0	0%	259	517	
	S-Other (ha)	0	0									0	0%	2,430	4,859	
West	H/HS (ha)	907	773										1,679	30%	5,537	11,073
	SH (ha)	18	41										59	19%	311	622
	S-WS (ha)	32	10										42	22%	194	388
	S-Other (ha)	70	146										216	6%	3,495	6,990
Central	H/HS (ha)	851	746										1,597	14%	11,551	23,101
	SH (ha)	69	21										90	8%	1,086	2,171
	S-WS (ha)	28	20										48	7%	677	1,353
	S-Other (ha)	138	78										216	3%	7,298	14,595
Divide	H/HS (ha)	707	520										1,227	33%	3,727	7,453
	SH (ha)	45	132										177	42%	427	854
	S-WS (ha)	115	4										119	27%	440	880
	S-Other (ha)	199	151										350	17%	2,045	4,089
L&M	H/HS (ha)	56	251										307	24%	1,254	2,507
	SH (ha)	52	40										92	43%	216	432
	S-WS (ha)	80	51										131	91%	144	287
	S-Other (ha)	257	234										491	26%	1,890	3,779
Variance		No acceptable variance.														
Comments		• A map of the planning units can be found in Appendix A.														

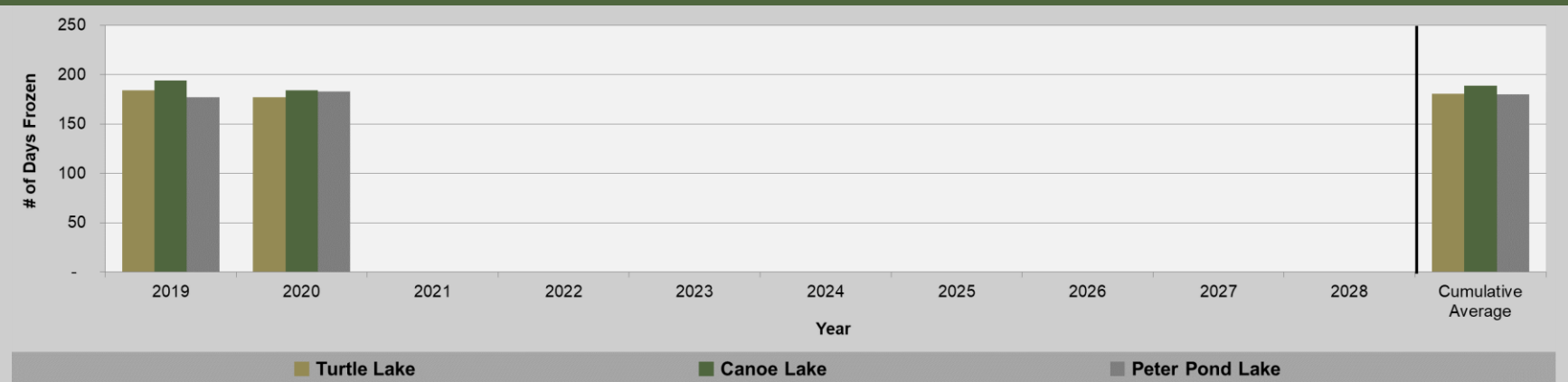
- Note that targets are based on model-derived volumes for each planning unit, not the total amount of Tactical Plan area for each species group, resulting in targets that are stricter in some cases than what is actually sustainable. Therefore, despite the proportionally large % of S-WS harvested in the L&M Planning Unit, it has been demonstrated to the MIT that harvest in this species group is nonetheless occurring within sustainable thresholds. Additional details have been provided in the Supplementary Data submission. Mistik will work with the MIT to refine the reporting of this indicator in order to ensure sustainability of harvest levels while accounting for operational realities.

Indicator #23		Aboriginal community involvement in planning processes		Status		Partially On Target (9/10)							
Target #23		Provide a minimum of two opportunities annually for Indigenous communities to have input in Mistik's 20-Year Forest Management Plan processes and implementation. Provide notification to specific co-management/advisory boards annually if no harvesting is planned in their area. This would be used in the case where a group is inactive due to lack of forestry activity in their area and has chosen not to be in regular contact with Mistik/L&M.				Reporting Cycle		Annual					
						Assessment Cycle		Annual					
# of opportunities for input into 20-year FMP													
Number of Opportunities for Input, by Community		Year of Measurement										Current Status	Target
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Divide Forest Advisory Council Corporation		7	7									7	2
Pierceland/Goodsoil Public Advisory Group *		2	2									2	2
Big Island Lake Cree Nation Chief and Council		6	5									5	2
Waterhen Lake First Nation Chief and Council		2	3									3	2
Beauval Co-management Board		6	8									8	2
Canoe Lake Co-management Board		8	7									7	2
Île-à-la-Crosse – ICS4		4	5									5	2
Buffalo Narrows Mayor and Council		2	2									2	2
Buffalo River Dene Nation Chief and Council		4	3									3	2
Birch Narrows First Nation		1	1									1	2
Variance		No acceptable variance.											
Comments		<ul style="list-style-type: none">One letter was sent to the Birch Narrows First Nation regarding operational plans due to limited harvest in the North part of the FMA. More engagement opportunities with this community were planned in 2021/22. <p>*The Pierceland/Goodsoil advisory group voluntarily has disbanded and representatives from the area attend the PAG and open houses held for operating plan review each fall.</p>											

Indicator #24	Spatial Identification and protection of culturally significant Heritage and Indigenous sites								Status	On Target
Target #24	On an annual basis, acquire and input into GIS 100% of all known locations of cultural, heritage or traditional Indigenous forest values and develop operating plans that protect these known sites of heritage, cultural and Indigenous forest values.								Reporting Cycle	Annual
									Assessment Cycle	5-Year
Category	Year of Measurement									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Number of New Additions	4	0			Assessment Year					Assessment Year
Map Produced?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Variance	No acceptable variance.									
Comments	<ul style="list-style-type: none"> Note: Mistik will keep a spatial dataset of known special places; however, due to confidentiality issues, specific details on type may not be available to the general public. No new sites were identified in 2020. See attached Special Places Map. 									

#25	Impacts of Climate Change on the Mistik FMP Area	Status	N/A
#25	1. The number of “days frozen” annual for three important lakes in the FMP area 2. Operational days lost due to “abnormal” weather/environmental conditions	Reporting Cycle	N/A
		Assessment Cycle	N/A

Part 1 – Annual Days Frozen (Selected Lakes)



Category	Year of Measurement										Cumulative Average
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Number of Days Frozen (Turtle Lake)	184	177									181
Number of Days Frozen (Canoe Lake)	194	184									189
Number of Days Frozen (Peter Pond Lake)	177	183									180
Variance	N/A										
Comments	<ul style="list-style-type: none"> The three lakes chosen are all locally important for fishing/sustenance and recreation within the FMP area. Local people near each lake assist Mistik with monitoring ice conditions. The trend over time may show a decline in each lake’s total number of “frozen days” per year which has impacts to the local people. “Days frozen” begin when the entire lake is frozen and end when all the ice is gone. This indicator is voluntary monitoring commitment described in Mistik’s 2019 20-Year Forest Management Plan, Volume III, Section 3.8 related to a study focusing on the impacts of climate change on sustainable forest management on the Mistik FMP area¹. As such, there are no associated targets. <p>¹Andrews-Key, S. A. 2018. <i>Vulnerability and Adaptation to Climate Change in Sustainable Forest Management and the Forest Industry in Saskatchewan</i>. (Unpublished doctoral dissertation). University of Saskatchewan, Saskatoon, Saskatchewan, Canada.</p>										

#25

Impacts of Climate Change on the Mistik FMP Area

Status

N/A

#25

1. The number of "days frozen" annual for three important lakes in the FMP area
2. Operational days lost due to "abnormal" weather/environmental conditions

Reporting Cycle

N/A

Assessment Cycle

N/A

Part 2 – Operational Days Lost due to Abnormal Environmental Conditions



Season	Category	Year of Measurement										Cumulative Average
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Summer	Harvest Shut Down (Too Dry)	0	0									0
	Harvest Shut Down (Too Wet)	10	8									9
	Harvest Moved (Too Wet)	0	0									0
Winter	Harvest Shut Down (Too Warm)	0	0									0
	Haul Weight Change (Too Warm)	15	2									9
Total		25	10									18
Variance		N/A										

Comments

- Mistik monitors the following (number of days):
 - In Summer (Start-up until October 31):
 - Harvesting shut-downs due to extremely dry (high fire hazard) or extremely wet conditions.
 - Harvesting moves directly related to wet conditions.
 - In Winter (November 31 until February 28) – note that in the FMP, winter dates were defined as November 1 – March 31. Mistik does not consider warmer temperatures in March abnormal, and as such does not record these days.
 - Harvesting shut-downs due to warm temperatures.
 - Winter haul weight changes due to warm temperatures
- This indicator is voluntary monitoring commitment described in Mistik's 2019 20-Year Forest Management Plan, Volume III, Section 3.8 related to a study focusing on the impacts of climate change on sustainable forest management on the Mistik FMP area¹. As such, there are no associated targets.

¹Andrews-Key, S. A. 2018. *Vulnerability and Adaptation to Climate Change in Sustainable Forest Management and the Forest Industry in Saskatchewan*. (Unpublished doctoral dissertation). University of Saskatchewan, Saskatoon, Saskatchewan, Canada.

Indicator #26a	Contributions to Co-management Boards								Status	Not Assessed (On Track)
Target #26a	On an annual basis, contribute financially to co-management boards according to the terms and conditions of co-management agreements.								Reporting Cycle	Annual
	Assessment Cycle								5-Year	
Category	Year of Measurement									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Contributions Met?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Variance	Acceptable variance is 20% of the 5-year target, based on the terms of the agreement.									
Comments	<ul style="list-style-type: none"> As part of Mistik's annual financial audit, an assessment is made on co-management fee payments. The assessment is done to determine if the payment amounts were correctly calculated based on the fee payment schedule. 									

Indicator #26b

% of total annual vendor / contractor payments made to local businesses

Status

Not Assessed
(On Track)

Target #26b

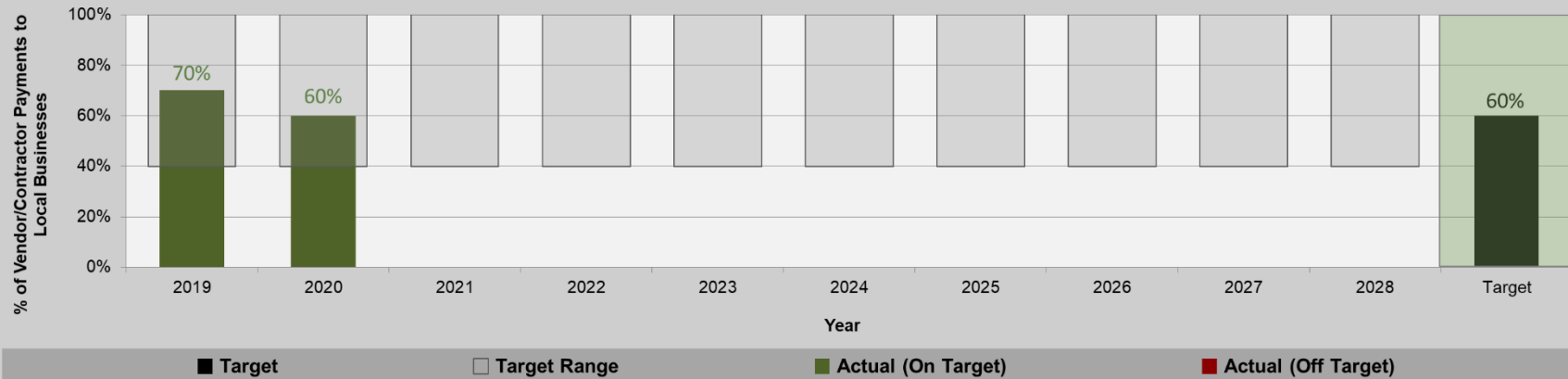
On an annual basis, 60% of total annual vendor/contractor payments made by Mistik & L&M will be to businesses from local communities in, and adjacent to, the FMA area.

Reporting Cycle

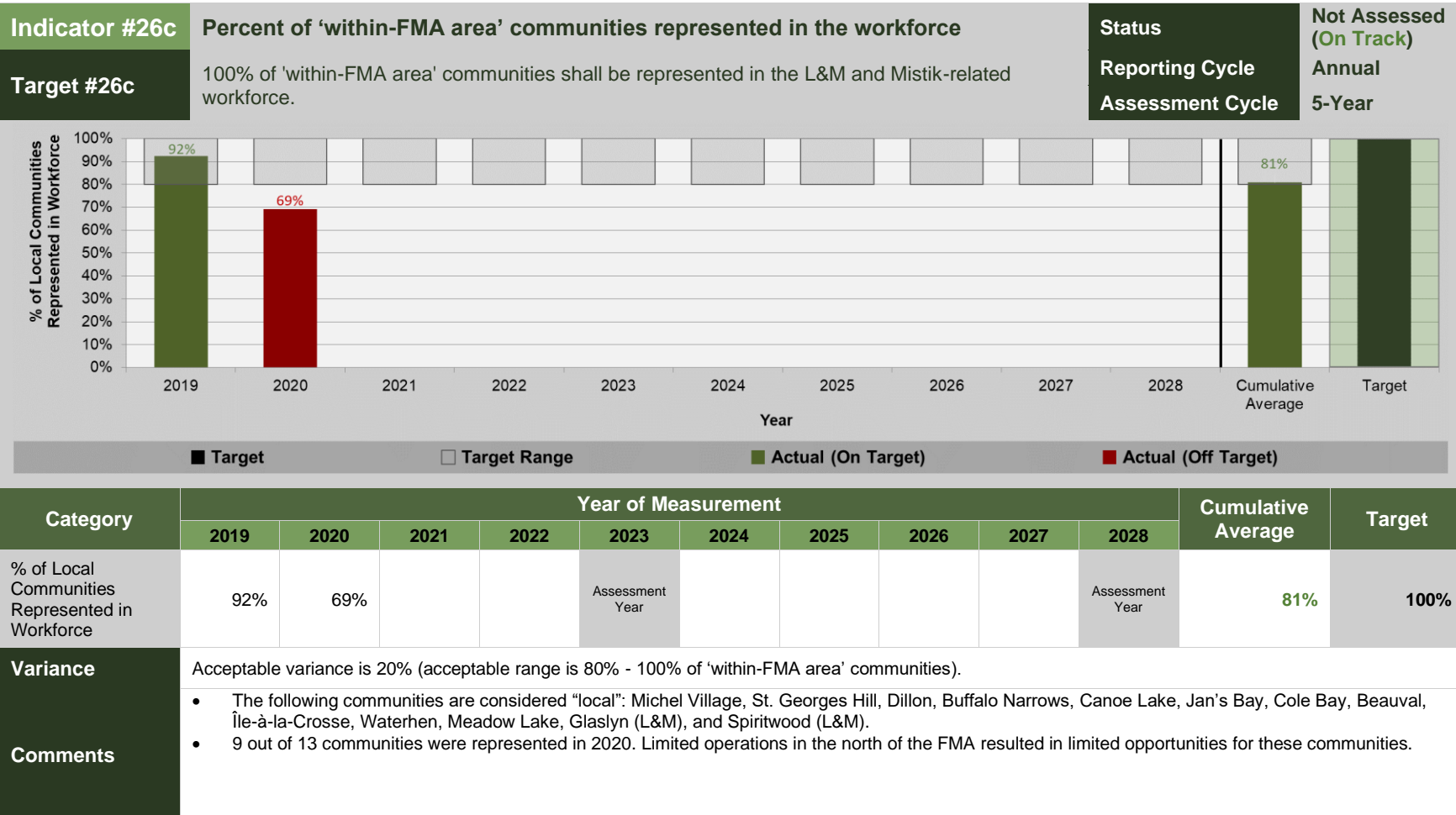
Annual

Assessment Cycle

5-Year



Category	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
% Vendor Payments to Local Businesses	70.2%	60.0%			Assessment Year					Assessment Year	60.0%	60%
Variance	Acceptable variance is 20% of total annual vendor/contractor payments (acceptable range: 40% - 100%).											
Comments	<ul style="list-style-type: none"> The following communities are considered "local": Michel Village, St. Georges Hill, Dillon, Buffalo Narrows, Canoe Lake, Jan's Bay, Cole Bay, Beauval, Île-à-la-Crosse, Waterhen, Meadow Lake, Glaslyn (L&M), and Spiritwood (L&M). 											



Indicator #27

Stakeholder Engagement

Target #27

Send letters annually to 100% of known “within-FMP area” stakeholders in areas where harvesting is proposed for the upcoming operating year. The letters will notify the stakeholder of Mistik/L&M plans to operate in their area and provide the opportunity for the individual to have input in planning process.

Status

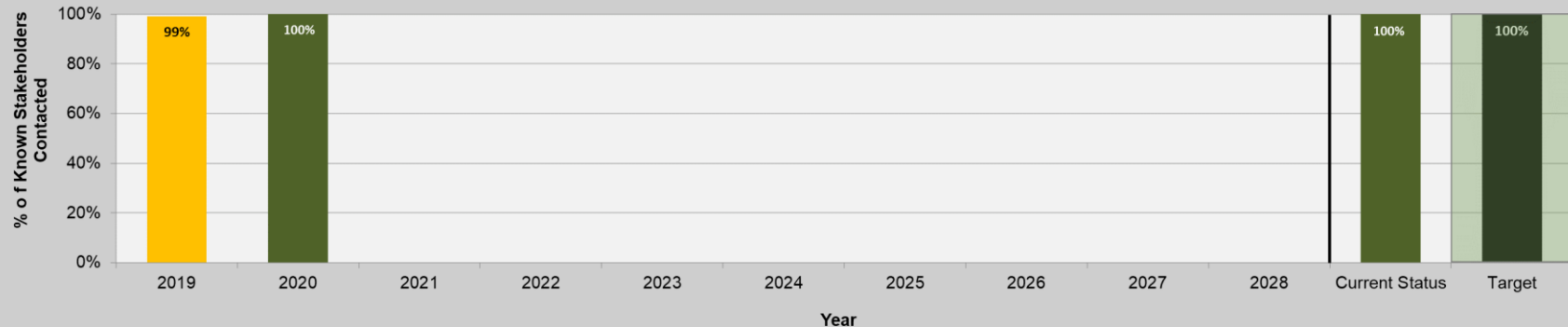
On Target

Reporting Cycle

Annual

Assessment Cycle

Annual



Actual (On Target)

Actual (Partially On Target)

Actual (Off Target)

Target

Category	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
# of Known Stakeholders	108	117									117	N/A
# with Contact Initiated by Letter	102	117									117	N/A
# with Contact Initiated by Other Means	5	0									0	N/A
% of Known Stakeholders Contacted	99%	100%									100%	100%

Variance

No acceptable variance.

Comments

- It should be noted that letters represent only a small portion of the ways Mistik engages local stakeholders.
- Throughout each operating year, a number of new stakeholders are added. An example is when an existing business is purchased by someone new. This transaction may take place outside of the timeframe when the operating plan is being developed (i.e., not in the fall), so an operating plan engagement letter is not sent at that time. Mistik contacts new stakeholders as we are made aware of them and reviews plans for the current/upcoming operating year. New stakeholders receive engagement letters for the next operating plan and going forward from that point.

5 FMP STANDARD REPORTING REQUIREMENTS

Reporting requirements, in addition to the indicators above, are outlined in the *Saskatchewan Environmental Code – Forest Management Planning Standard* (Section 1-54).

5.1 MANAGEMENT IMPLEMENTATION TEAM (MIT)

The MIT met in November 2020 and March 2021 to review the progress of the annual report and discuss other forest management plan-related topics. The MIT will be engaged in the presentation of the final 2020-21 annual report in April 2022. Going forward, the MIT will be engaged as often as necessary with respect to implementation of the forest management plan and annual reports.

5.2 ANNUAL REPORT CONTENT

5.2.1 VOIT Tracking and Monitoring

VOIT updates in this annual report include an assessment of each target and notes on deviations and why they are occurring. Supporting data is either provided in this document or to the ministry separately (for confirmation/analysis). In some cases, the data is confidential (financial or stakeholder-related) and therefore not all background data is included in this document.

Mechanisms employed in Mistik monitoring processes include several systems:

- The environmental management system (EMS) and certification processes include standard operating procedures, annual staff and contractor training, a self-inspection program and report, and an external audit. The EMS also includes procedures for regular (typically daily) monitoring of various operational activities and administrative processes.
- There are several databases that are maintained that contribute to VOIT monitoring including GIS and associated data, tracking of silviculture and indicator-related information, stakeholder commitments, operating plan approval and amendment conditions, watercourse crossing activity and other certification, operational and planning-related data. Some of this information is provided to the ministry at various required intervals (e.g., annual data submission, monthly stakeholder commitments, etc.).

- Stakeholder and public engagement records are maintained at Mistik. As many of these contain confidential information, they are not included in this document. The records are made available to the ministry and external certification auditors. A summary of public concerns can be found in Appendix A. Mistik posts an advertisement in the local newspaper each year during operating plan development (fall) inviting the public to have input in the planning process. Mistik also has ongoing, regular engagement with stakeholders throughout the operating year.
- External certification audit results are provided to Mistik and can also be found on the Mistik website.

5.2.2 FMP Registry

The status of each of Mistik's 2019 20-Year FMP Commitments is as follows.

Mistik 2019 20-Year Forest Management Plan Commitments (Volume III Registry Items)			
Commitment	Measurement Criteria	Schedule for Completion	Annual Update
Public Involvement (Public Engagement Process)			
Mistik will update the Mistik Register of Public Issues and Concerns on an annual basis	Evidence of the review process and publicly available Register	Annual implementation and reporting (August 31)	Registry has been updated. There were no public complaints made to Mistik during 2019/20 or 2020/2021. Register of public concerns can be found in Section A4.
Non-Timber Values			
Identify visually sensitive areas (VSA) and maintain specified visual quality objectives (VQO).	Evidence in the annual report of the identification of visually sensitive areas and specified visual quality objectives	Annual implementation and reporting (August 31)	VSA are inspected based on established VQO's during harvest operations, as part of the annual external audit and the EMS self-inspection process.
Maintain database of watercourse crossings	Mistik/L&M GIS layer and operating plans maps to illustrate location, type, and size of crossing	GIS layer and maps to be updated annually.	Mistik's GIS is updated on a regular basis as watercourse crossings are installed and removed. Data is provided to the ministry annually in the operating plan and under the Forest Data Submission Standard.

Mistik 2019 20-Year Forest Management Plan Commitments (Volume III Registry Items)			
Commitment	Measurement Criteria	Schedule for Completion	Annual Update
Natural Disturbance			
With respect to an incipient outbreak of an invasive insect, Mistik will collaborate with the Ministry of Environment in mapping, monitoring, and assisting in facilitating a control program	Resources allocated to mapping, monitoring, and assisting with a control program	As required.	There have been no reported invasive insect outbreaks on the Mistik or L&M FMA in 2019/20 or 2020/2021.
Conformance with the Tactical Plan			
With respect to independent operators, Mistik will collaborate with Saskatchewan Ministry of Environment to obtain annual records.	Independent operator "report" (geospatial and attribute data) provided to Mistik by MoE on an annual basis. Independent operator harvest area records retained in Mistik's GIS system.	Annual implementation and reporting (August 31).	Independent operator report for 2020/21 was provided to Mistik on February 16, 2022.

Additionally, the status of Mistik's 2019 FMP approval conditions, is as follows.

Mistik 2019 20-Year Forest Management Plan Approval Conditions	
Condition	Current Status
(a) Proceed with the development in accordance with the FMP	Implementation of the FMP began effective April 1, 2019.
(b) Provide notification of any changes	No notifications of changes have been submitted to the ministry as of the submission of this annual report. Mistik is keeping a log of potential FMP amendments that will be addressed in the next 1-2 years.
(c) Follow the requirements of <i>The Forest Resources Management Act</i> , other laws, and the Saskatchewan Environmental Code	Mistik's operations are monitored for compliance with laws and regulations through both self-inspections and government conducted regulatory inspections. Results are reported annually can be found in Section 5.2.4.

Mistik 2019 20-Year Forest Management Plan Approval Conditions	
Condition	Current Status
(d) Adapt the FMP based on the direction provided by the Range Plan for Woodland Caribou in Saskatchewan	Mistik is in the process of amending the FMP for alignment with the provincial caribou range plan which was finalized in 2021. Several meetings with the FMP planning team are planned for 2022.
(e) Adapt Silvicultural Ground Rules as better knowledge becomes available	Mistik is working with the ministry to address SGRs. Additional meetings have been held in 2021 and 2022 regarding projected SGR methodology for reforested stands, and draft revisions to SGRs for this methodology will be provided for GoS feedback along with this annual report. These draft SGRs, including any other SGR revisions, will be submitted along with other revisions made to the FMP document such as those described in item d.).
(f) Complete a study to assess average historical fire-cycle on the Mistik Management Ltd. and L&M Wood Products (2018) Limited Partnership FMA areas within seven years of this approval	This study has not been finalized.
(g) Complete a study to assess species specific softwood sawlog degrade factors on the Mistik Management Ltd. and L&M Wood Products (2018) Limited Partnership FMA areas within seven years of this approval	This study has not been initiated yet.

5.2.3 Silviculture Effectiveness Monitoring

Status of regenerated areas. All renewal activity and regeneration survey data are provided to the ministry annually through the Forest Data Submission Standard process. See also Target #9 (“Post-Harvest Areas are Successfully Regenerated”), as well as Silviculture Effectiveness Indicators #1-3, located in Appendix A.

Areas where strategies and implementation techniques are inadequate or need improvement. Mistik and L&M have a very high success rate of harvested blocks achieving required Free to Grow status (see Target #9 Post Harvest Areas are Successfully Regenerated). Strategies to improve the regeneration in any “not sufficiently regenerating” (NSR) areas are provided in Mistik’s annual operating

plans. Currently all NSR areas are due to fires that occurred in 2015. These areas have had field inspections and are showing good signs of natural regeneration in the burned areas. They are scheduled for a Free-to Grow re-survey in 2029. There are no indications that Mistik or L&M should change the methods used for regenerating harvested areas at this time.

Polygons are on the yield trajectories that are identified in the associated SGR.

Silviculture effectiveness indicators can be found in Appendix Section A5. These indicators measured observed Free-to-Grow surveys against thresholds identified in Table 14-2 of the Mistik 2019 20-Year Forest Management Plan – Silviculture Ground Rules. These silviculture indicators show that the regenerating mixedwood areas surveyed in 2020 had both hardwood and softwood densities well above the targets set in the SGRs (Silviculture Effectiveness Indicators #1 and #2). Furthermore, both softwood and hardwood heights in all regenerating areas surveyed were well above the thresholds determined in the SGRs (Silviculture Effectiveness Indicators #3 and #4). It can be determined based on these indicators that the areas surveyed were either consistent with, or exceeding, the trajectories assumed in the Silviculture Ground Rules.

Assumptions in the forest estate modelling. The Silviculture Ground Rules provide assumptions and thresholds for regenerating stand performance used in the Forest Estate Modelling. Performance relative to these thresholds can be found in Appendix Section A5 (see section iii. above for more information). Additionally, FMP Indicators #5, #6, and #9 provide further verification of Forest Estate Modelling assumptions, including whether a.) the softwood component of regenerating stands is maintained, b.) regenerating area is projected to meet targets for future forest composition, and c.) regenerating area meets stocking requirements.

Renewal tracking log. Mistik tracks renewal using several tools including the GIS system and regeneration survey database. All renewal activity and survey data are provided to the ministry annually through the Forest Data Submission Standard process. The data provided includes year of harvest, size of area harvested, renewal treatment applied (planting, leave for natural, site preparation, etc.), and regeneration survey results. NSR area renewal strategies are addressed in Mistik's annual operating plans.

Pre-harvest cover species group and projected SGR classification for all blocks with a Free-to-Grow survey in 2020 are also provided in the Supplementary Data submission for Indicator #6.

5.2.4 Operational Implementation of the FMP

The following table summarizes non-compliances in 2020/21. Note that Mistik inspections may include items not in compliance with internal administrative processes.

Mistik 2020-2021 Annual Report – Non-Compliances									
Target #/Activity	Mistik Inspection Data			Ministry Identified Non-Compliances (Enforcement Action Taken)					
	# of Inspections	# In Compliance	Not in Compliance	Total Items Non-Compliant	No Action Taken	Voluntary Compliance Opportunity	Notice of Violation	Stop Work Order	Administrative Penalty
Target #14 (Utilization)	11	11	0	0	0	0	0	0	0
Target #16 (Harvesting)	160	156	4	12	3	3	6	0	1
Target #17 (Crossings)	66	65	1	5	1	0	4	0	0
Other - Camps*	4	3	1	0	0	0	0	0	0
Other - EMS	12	12	0	0	0	0	0	0	0
Other - Roads*	29	29	0	0	0	0	0	0	0
Total	271	265	6	17	4	3	10	0	1

*Ministry data has included any non-compliance items in the "VOIT#16 Harvest" category

The following actions were taken to address these ministry-identified non-compliances.

1. Three incidents of harvesting (road construction-related) trespasses resulting in one notice of violation and two with no further action taken. A voluntary compliance opportunity was also given in one incident where regeneration was damaged. Mistik self-reported three incidents where road construction operators trespassed into areas where there was no authorization to construct roads. Two were on existing seismic line/trails and one was through a small section of an older harvest block. Additional operator awareness training was conducted and Mistik is looking at how technology in road construction equipment may help to avoid these situations in the future. Areas where regeneration was damaged (50m through block 01022007) will be replanted when the adjacent block is planted.
2. Two incidents of slash piles not being burned/spread resulting in two voluntary compliance opportunities and one notice of violation. In both locations, 2 piles were found unburned in the block (left) and two along the roads into the block. The piles along the roads were spread.
3. One incident of road reclamation not completed within a two-year timeframe (no further enforcement action taken). Mistik self-reported that some road reclamation from the 2014/15 operating year was not completed and got the work done right away. No further action was taken.
4. One incident of rutting (excessive soil disturbance) resulting in an administrative penalty. Mistik self-reported rutting in a harvest block. Additional skidder-operator awareness training was given and will continue to be done going forward.
5. Mistik had two crossing installations where multiple enforcement actions were taken.
 - Incident 1 – block 04010050 – Notices of violation were issued for a riparian trespass, failing to ribbon a riparian buffer, damage to the bed, bank, or boundary of a stream, and failure to install an adequate crossing structure. In this block, a brush mat was installed where there should have been a culvert. There was also some skidding that took place that was not at the designated crossing location (through the stream).
 - Incident 2 – block 04010073 – Notices of violation were issued for installation of an unauthorized crossing (no notification of re-installation), failing to follow the AHPP, and failing to report a noncompliance. An incident of allowing deleterious material to enter a watercourse resulted in no further action taken. A crossing was installed incorrectly and had to be replaced (twice). There was also in incident where a log

truck needed to be pulled up a hill at the same crossing location and equipment crossed the creek beside the culvert to assist the truck.

- As a result of these incidents, additional operator awareness was provided (one of the operators doing a culvert installation was inexperienced). Also, Mistik has decided that a qualified person must be on site when these types of installations are done.
6. One incident of failing to notify the ministry of a temporary work camp location resulted in a notice of violation. Older work camp notifications did not always contain all of the required information. Mistik has put in place systems to do complete submissions of updates related to work camps.
 7. Mistik also received voluntary compliance opportunities for having litter at a tree planting camp (cleaned up), and unauthorized renewal activity (some planting blocks were not listed on the renewal table in the operating plan). An issue related to renewal data in data submission was identified but no further enforcement action was taken.

APPENDIX A: SUPPORTING DATA

TABLE OF CONTENTS

Table of Contents	57
A1. Harvested Block Summary	58
A2. Planning Units (Map)	59
A3. Management Units (Map)	60
A4. Register of Public Concerns	61
A5. Silviculture Effectiveness Indicators	62
A6. Harvest Events (Summaries)	66
A7. Harvest Events (Maps)	73

A1. HARVESTED BLOCK SUMMARY

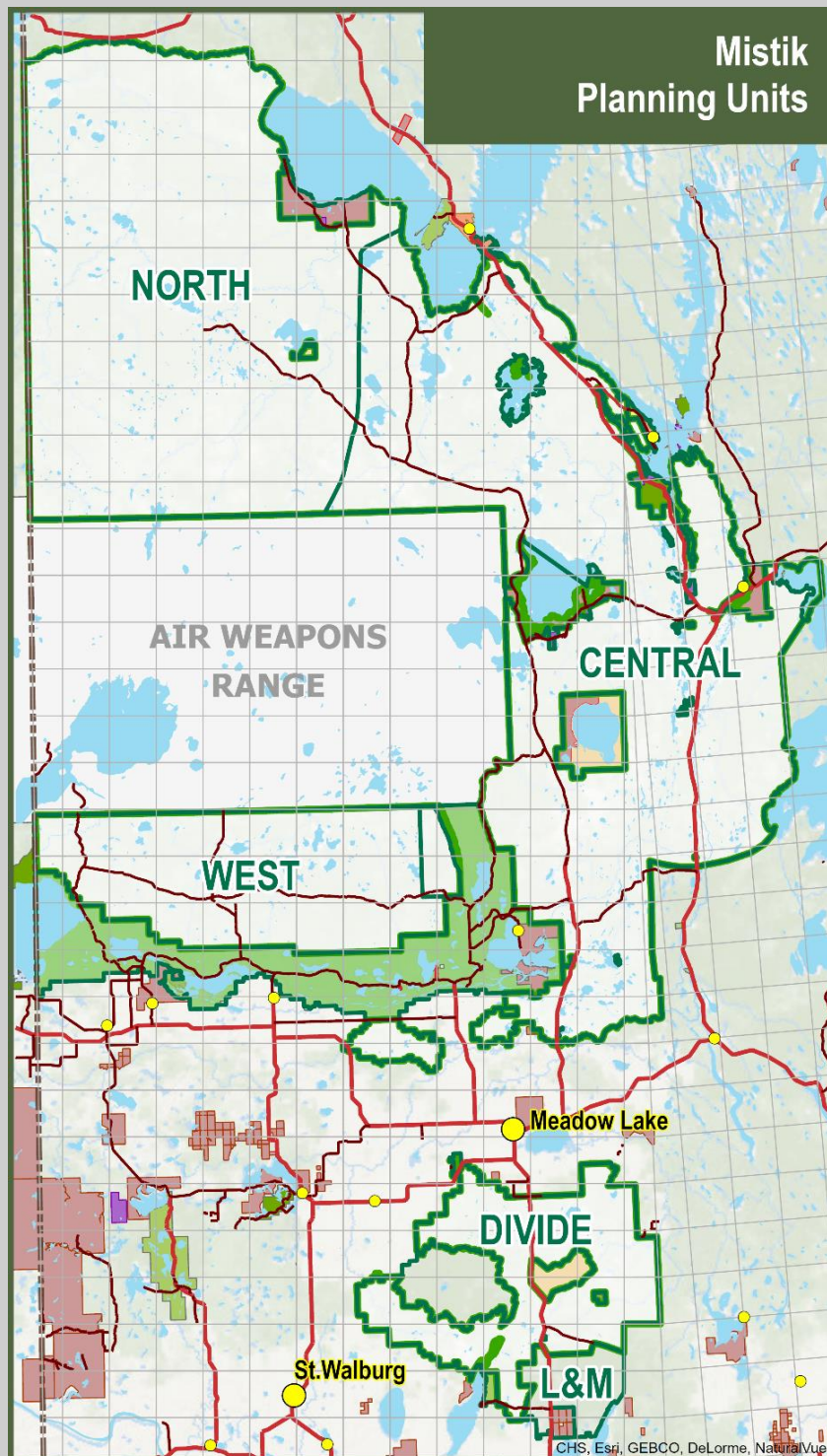
The following table lists the harvested blocks included in this report.

Mistik 2019-2020 Annual Report – Harvested Blocks					
Opening Number	Operating Year	Area (ha)	Opening Number	Operating Year	Area (ha)
01012016	2020-2021	33.3	04040011	2020-2021	95.8
01022022	2020-2021	34.5	07015019	2020-2021	88.5
01022028	2020-2021	30.5	08009038	2020-2021	23.2
01022035	2020-2021	38.3	08015012	2020-2021	87.2
01022075	2020-2021	79.6	08016020	2020-2021	65.9
01022076	2020-2021	18.3	08018011	2020-2021	56.4
01030002	2020-2021	44.9	08018014	2020-2021	83.1
01032010	2020-2021	84.4	12008009	2020-2021	92.3
01049025*	2020-2021	7.9	12013019	2020-2021	130.7
01052004	2020-2021	451.4	12017005	2020-2021	41.0
02017015	2020-2021	117.7	85004024	2020-2021	28.5
02017019	2020-2021	14.9	85004043	2020-2021	62.7
02017022	2020-2021	45.0	85004066	2020-2021	12.8
02017024	2020-2021	20.2	85004095	2020-2021	97.4
02017095	2020-2021	67.1	85006073	2020-2021	71.8
03003014	2020-2021	297.7	85007018	2020-2021	54.5
03010016	2020-2021	150.9	85008004	2020-2021	125.1
04023023	2020-2021	59.0	85009038	2020-2021	53.5
04025050	2020-2021	38.7	85010008	2020-2021	70.5
04040009	2020-2021	269.8			
Total					3,245.1

*Block 01049025 was harvested by a third-party operator on the Mistik license.

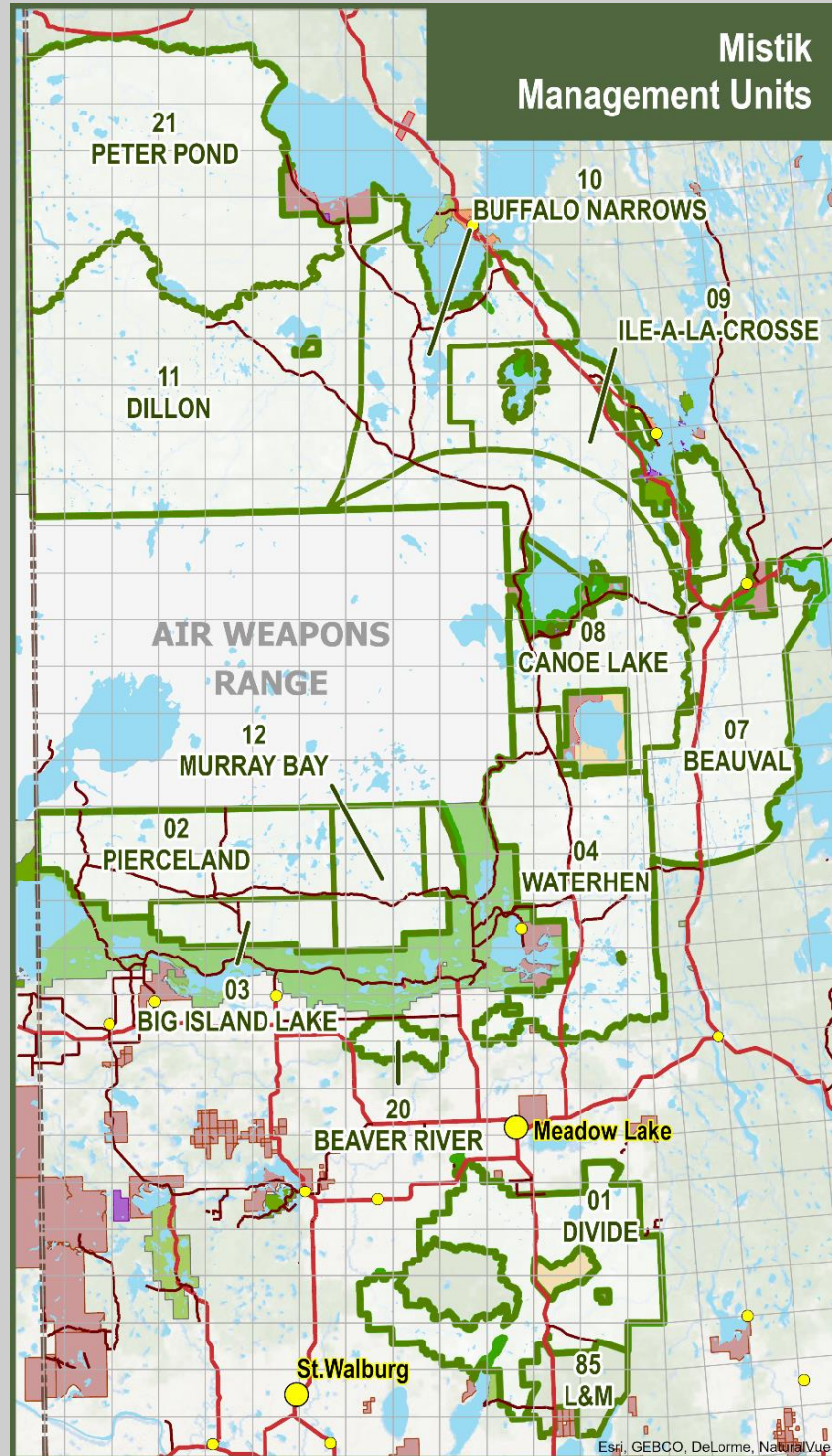
A2. PLANNING UNITS (MAP)

Planning Units



A3. MANAGEMENT UNITS (MAP)

Management Units

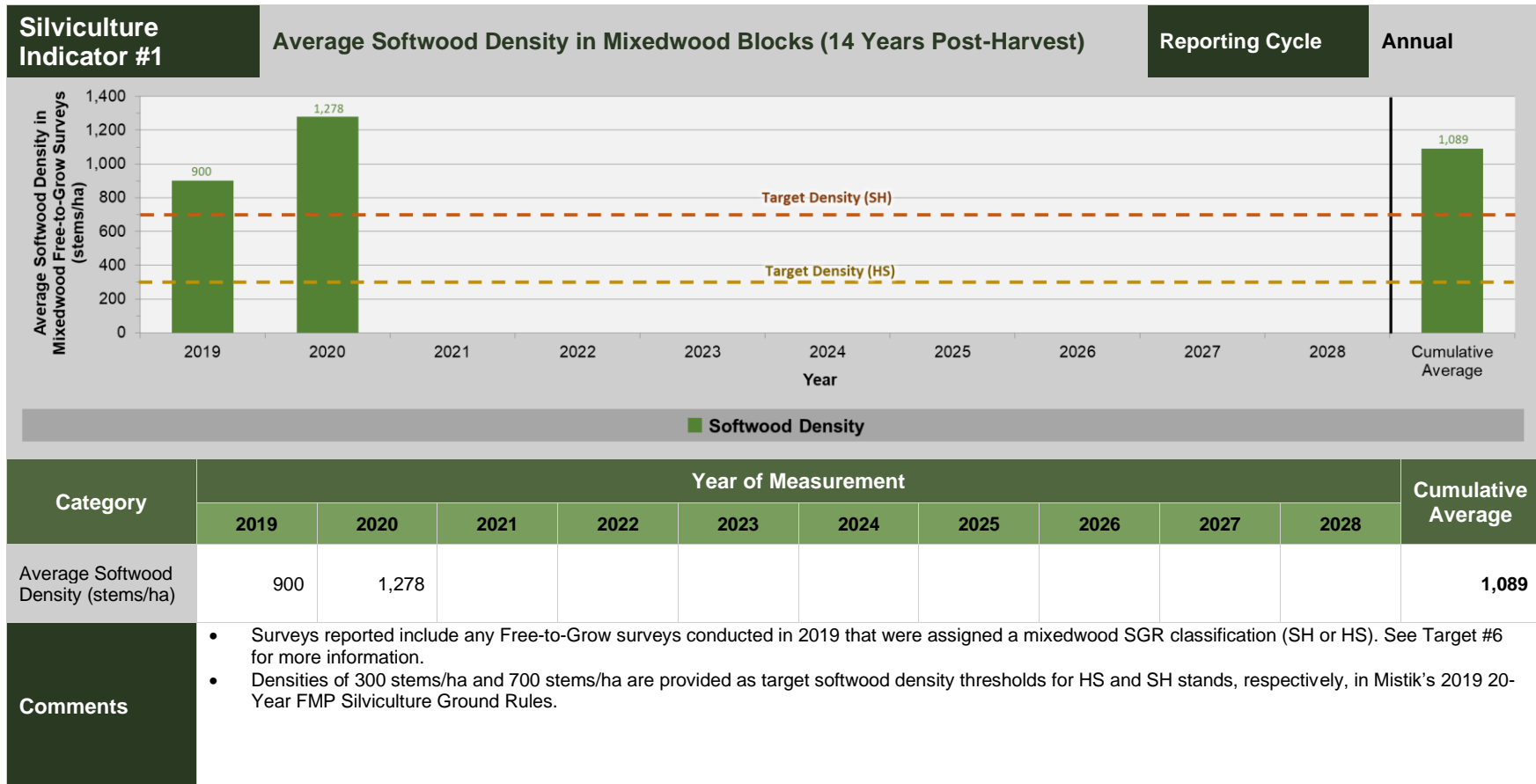


A4. REGISTER OF PUBLIC CONCERNS

Mistik 2019 20-Year Forest Management Plan							
Register of Issues and Concerns related to the Mistik or L&M FMA							
No.	Name and Affiliation	Community Affiliation	Forum and Date	Issue Raised	Mistik Response and Proposed Action Plan	Completion Date of Proposed Action	Other Comments

**Note: There were no new additions to the register of public concerns in 2019 or 2020*

A5. SILVICULTURE EFFECTIVENESS INDICATORS

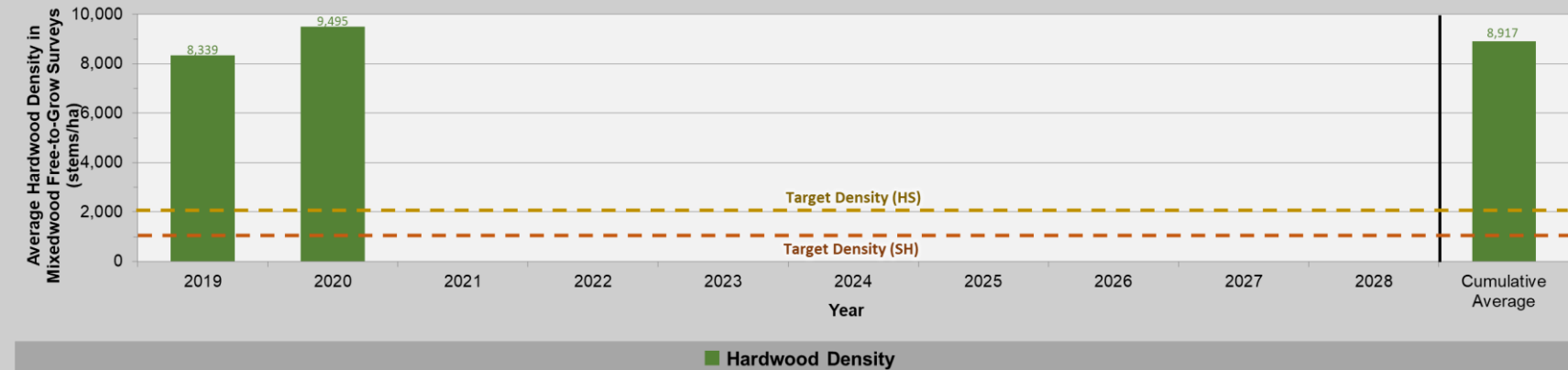


Silviculture Indicator #2

Average Hardwood Density in Mixedwood Blocks (14 Years Post-Harvest)

Reporting Cycle

Annual



Category	Year of Measurement										Cumulative Average
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Average Hardwood Density (stems/ha)	8,339	9,495									8,917
Comments	<ul style="list-style-type: none"> Surveys reported include any Free-to-Grow surveys conducted in 2019 that were assigned a mixedwood SGR classification (SH or HS). See Target #6 for more information. Densities of 1,000 stems/ha and 2,000 stems/ha are provided as target hardwood density thresholds for SH and HS stands, respectively, in Mistik's 2019 20-Year FMP Silviculture Ground Rules. 										

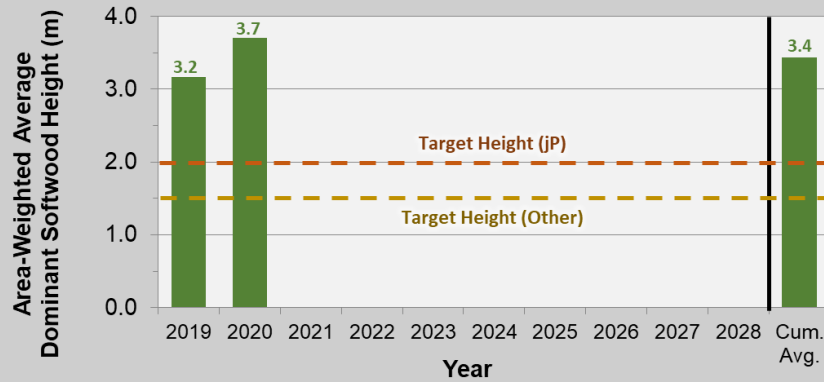
Silviculture Indicator #3

Average Softwood Tree Heights (14 Years Post-Harvest)

Reporting Cycle

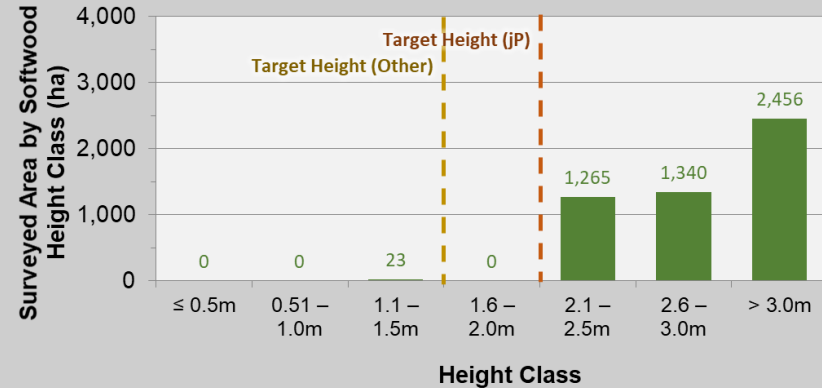
Annual

Average Softwood Height



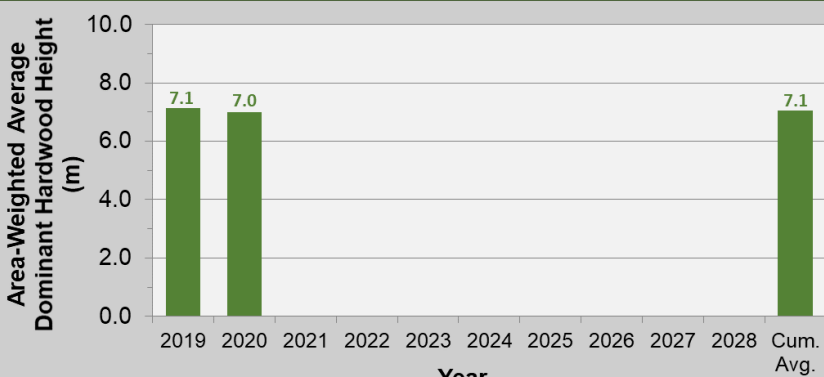

■ Average Softwood Height

Area by Softwood Height Class



■ Area

Softwood Height Class	Year of Measurement										Cumulative Average
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
% Area ≤ 0.5m	0%	0%									0%
% Area 0.51 – 1.0m	0%	0%									0%
% Area 1.1 – 1.5m	0%	0.5%									0.2%
% Area 1.6 – 2.0m	0.8%	0%									0.4%
% Area 2.1 – 2.5m	13.8%	24.9%									19.0%
% Area 2.6 – 3.0m	57.1%	26.4%									42.6%
% Area > 3.0m	28.4%	48.3%									37.8%
Area-Weighted Average Height (m)	3.2	3.7									3.4
Comments	<ul style="list-style-type: none"> Softwood heights refer to the average height of the dominant softwood species within a surveyed area. Heights of 2m and 1.5m are provided as target heights for Jack Pine and other softwood species, respectively, in Mistik's 2019 20-Year FMP Silviculture Ground Rules. 										

Silviculture Indicator #4		Average Hardwood Tree Heights (14 Years Post-Harvest)									Reporting Cycle	Annual
Average Hardwood Height						Area by Hardwood Height Class						
												
■ Average Hardwood Height						■ Area						
Hardwood Height Class	Year of Measurement										Cumulative Average	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
% Area ≤ 2.0m	0%	0%									0%	
% Area 2.1 – 3.0m	0%	0%									0%	
% Area 3.1 – 4.0m	0%	0%									0%	
% Area 4.1 – 5.0m	1.6%	2.0%									1.8%	
% Area 5.1 – 6.0m	14.7%	12.3%									13.7%	
% Area 6.1 – 7.0m	39.4%	55.8%									46.5%	
% Area > 7.0m	44.4%	29.9%									38.1%	
Area-Weighted Average Height (m)	7.1	7.0									7.1	
Comments <ul style="list-style-type: none"> Hardwood heights refer to the average height of the dominant hardwood species within a surveyed area. A height of 3m is provided as a target for hardwood species in Mistik's 2019 20-Year FMP Silviculture Ground Rules. 												

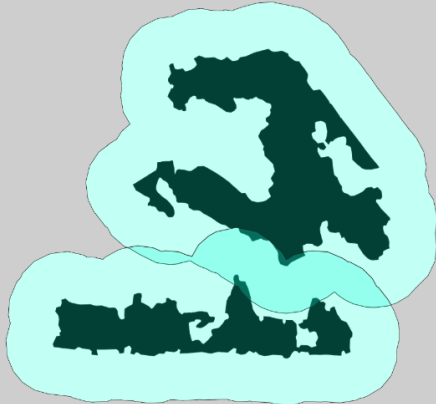
A6. HARVEST EVENTS (SUMMARIES)

The tables below indicate the status of harvest events on the Mistik FMA as of the 2020/21 operating year. Events are only considered “completed” if all harvesting, silviculture, and reclamation activities have been completed. Three events are considered “complete” in 2020/21.

The following figure illustrates the process used to generate the boundaries of harvest events and retention.

Harvest Events – Process

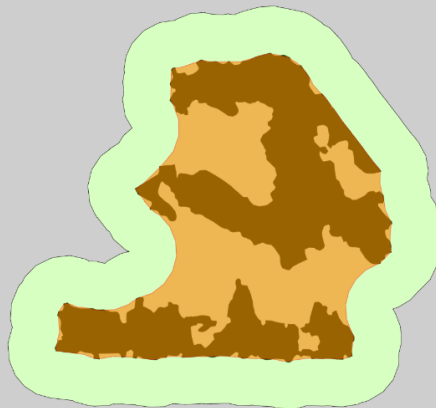
The process to determine harvest “events” is as follows:



Step 1: Cutblocks (black) that are harvested within the given 10-year period are buffered outwards by 250m (blue).



Step 2: Buffers are merged (green).



Step 3: Resultant polygon (green) is buffered inwards by 250m (orange).



Step 4: Resulting polygon (orange) is considered the event boundary.

Harvest Event Retention – Process

The process to determine retention within harvest events is as follows:



“Retention” for this process is defined as un-harvested area that meets the following criteria:

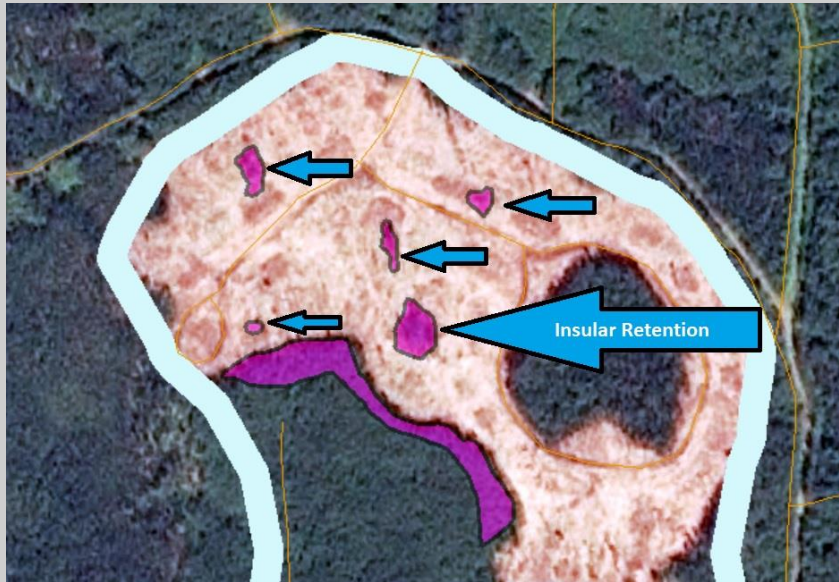
- a.) Within the harvest event boundary (red), both inside and outside of cut block boundaries (grey).
- b.) Contains standing timber that is reasonably representative of that harvested within the surrounding cut block(s).
- c.) Is otherwise harvestable based on ground conditions, topography, and any other operational factors (e.g., is not overly wet, steep, etc.).
- d.) Meets all other requirements for retention as per Mistik’s 2019 Forest Management Plan and all other operational requirements.

“Insular” retention is defined as those patches within a harvest event that also fall within a harvested cut block boundary.

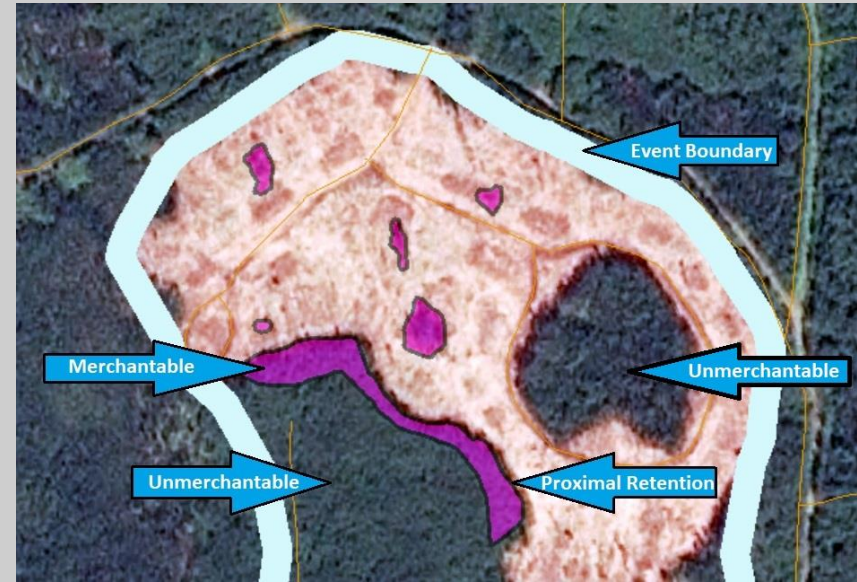
“Proximal” retention is defined as those patches that are adjacent to and/or not within a harvested cut block boundary.

Harvest cut block (grey) boundaries are generated manually using high-resolution photography to complete cutover updates after harvest. Event boundaries (red) are generated using the buffering rules as per the FMP standard (described above). Polygons of insular (green) and proximal (purple) retention are generated manually by reviewing cutover update photography, pre-harvest photography, SFVI inventory, merchantability layers, and other spatial data as required using GIS software.

Example of insular retention:



Example of proximal retention:



Note that while this process is completed manually for harvest events in the 2020/21 timber year, Mistik is currently developing methodology to complete this retention delineation in a partially or fully automated manner, using updated inventory data.

Additionally, the following tables summarize the number of completed events, and details of each event, including in-progress events. Note that these are updated on an annual basis based on actual harvest boundaries and observed activities, and that all harvested areas reported only include area operated under Mistik's 2019 Forest Management Plan (i.e., harvested in the 2019/20 operating year or later).

Mistik 2019-2028 Harvest Events (Summary)		
Year	Events Completed (#)	% Events Completed in 10 Years or Less
2019	0	N/A
2020	3	100%
2021		
2022		
2023		
2024		
2025		
2026		
2027		
2028		
Total	3	100%

Mistik 2019-2028 Harvest Events											
Event No.	General Area	Status	OP Year Event Started	OP Year Event Completed	Total Years Open	Area Harvested* to Date (ha)	Planned (T1/T2) Harvest Area (ha)	Completed Events			
								Total Area (ha)	Harvested Area (ha)	Total Retention %	Insular Retention %
TA058	Rat Lake	Closed	2017/18	2020/21	3**	1,663.7	1,900.1	2,296.3	1,663.7	4.8%	1.5%
TA252	Booth Bay Road	Closed	2019/20	2020/21	1	16.9	18.5	23.6	16.9	6.9%	1.4%
TA249	Booth Bay Road	Closed	2019/20	2020/21	1	60.3	67.6	100.7	60.3	7.9%	1.2%
TA005	Helene South	Open	2019/20	TBD	TBD	347.5	2,711.9	TBD	TBD	TBD	TBD
TA026	Burness East	Open	2019/20	TBD	TBD	506.5	9,055.7	TBD	TBD	TBD	TBD
TA039	Scorcher West	Open	2019/20	TBD	TBD	327.2	1,447.4	TBD	TBD	TBD	TBD
TA042	Divide/L&M	Open	2019/20	TBD	TBD	963.4	28,213.0	TBD	TBD	TBD	TBD
TA108	Gravel Ridge	Open	2019/20	TBD	TBD	220.9	3,921.3	TBD	TBD	TBD	TBD
TA115	9 Mile Pine	Open	2019/20	TBD	TBD	281.0	6,736.7	TBD	TBD	TBD	TBD
TA118	Gold Lake	Open	2019/20	TBD	TBD	512.5	8,127.1	TBD	TBD	TBD	TBD
TA151	Horseshoe Lake	Open	2019/20	TBD	TBD	201.8	6,498.3	TBD	TBD	TBD	TBD
TA158	Musk Creek	Open	2019/20	TBD	TBD	105.7	385.1	TBD	TBD	TBD	TBD
TA162	Martineau South	Open	2019/20	TBD	TBD	11.9	20.7	TBD	TBD	TBD	TBD
TA168	Martineau South	Open	2019/20	TBD	TBD	527.0	1,411.0	TBD	TBD	TBD	TBD
TA177	Mallard	Open	2019/20	TBD	TBD	270.3	4,556.4	TBD	TBD	TBD	TBD
TA209	Low Creek	Open	2019/20	TBD	TBD	738.5	3,471.7	TBD	TBD	TBD	TBD
TA276	Keeley River Crossing	Open	2019/20	TBD	TBD	134.2	173.4	TBD	TBD	TBD	TBD
TA282	Beauval Pastures	Open	2019/20	TBD	TBD	189.6	229.0	TBD	TBD	TBD	TBD
TA002	Helene West	Open	2020/21	TBD	TBD	53.5	76.1	TBD	TBD	TBD	TBD
TA004	Moose Country	Open	2020/21	TBD	TBD	7.9	776.2	TBD	TBD	TBD	TBD
TA007	Helene North	Open	2020/21	TBD	TBD	71.8	1,348.9	TBD	TBD	TBD	TBD
TA022	Divide South	Open	2020/21	TBD	TBD	104.1	2,954.5	TBD	TBD	TBD	TBD

Mistik 2019-2028 Harvest Events											
Event No.	General Area	Status	OP Year Event Started	OP Year Event Completed	Total Years Open	Area Harvested* to Date (ha)	Planned (T1/T2) Harvest Area (ha)	Completed Events			
								Total Area (ha)	Harvested Area (ha)	Total Retention %	Insular Retention %
TA025	Divide South	Open	2020/21	TBD	TBD	97.4	830.1	TBD	TBD	TBD	TBD
TA129	Waterhen Cut-Across	Open	2020/21	TBD	TBD	59.0	968.4	TBD	TBD	TBD	TBD
TA141	Porcupine Lake	Open	2020/21	TBD	TBD	264.9	1,632.1	TBD	TBD	TBD	TBD
TA150	Musk Creek	Open	2020/21	TBD	TBD	38.7	52.4	TBD	TBD	TBD	TBD
TA237	McCallum Lake	Open	2020/21	TBD	TBD	87.2	1,455.6	TBD	TBD	TBD	TBD
TA260	Beauval Mistletoe	Open	2020/21	TBD	TBD	88.5	4,735.2	TBD	TBD	TBD	TBD
TA262	Keeley Portage	Open	2020/21	TBD	TBD	23.2	4,158.6	TBD	TBD	TBD	TBD
TA263	Booth Bay Road	Open	2020/21	TBD	TBD	65.9	228.9	TBD	TBD	TBD	TBD
TA271	Pringle Lake	Open	2020/21	TBD	TBD	83.1	98.8	TBD	TBD	TBD	TBD

* Area harvested refers only to blocks harvested in the 2019-2020 operating year or later

** In some cases, the cutblocks within an event may be completed however reclamation/renewal may be outstanding. Events are not considered complete until reclamation/renewal work is completed and will therefore be reported as complete in future years.

*** Harvest under the current tactical plan from 2017 and 2018 has been included in event TA058, however this is an exception and normally only blocks harvested in the 2019/20 operating year or later are considered.

A7. HARVEST EVENTS (MAPS)

Maps are provided below for the following events completed in 2020/2021:

- TA058
- TA252
- TA249

HARVEST EVENT MAP

EVENT NUMBER: TA058



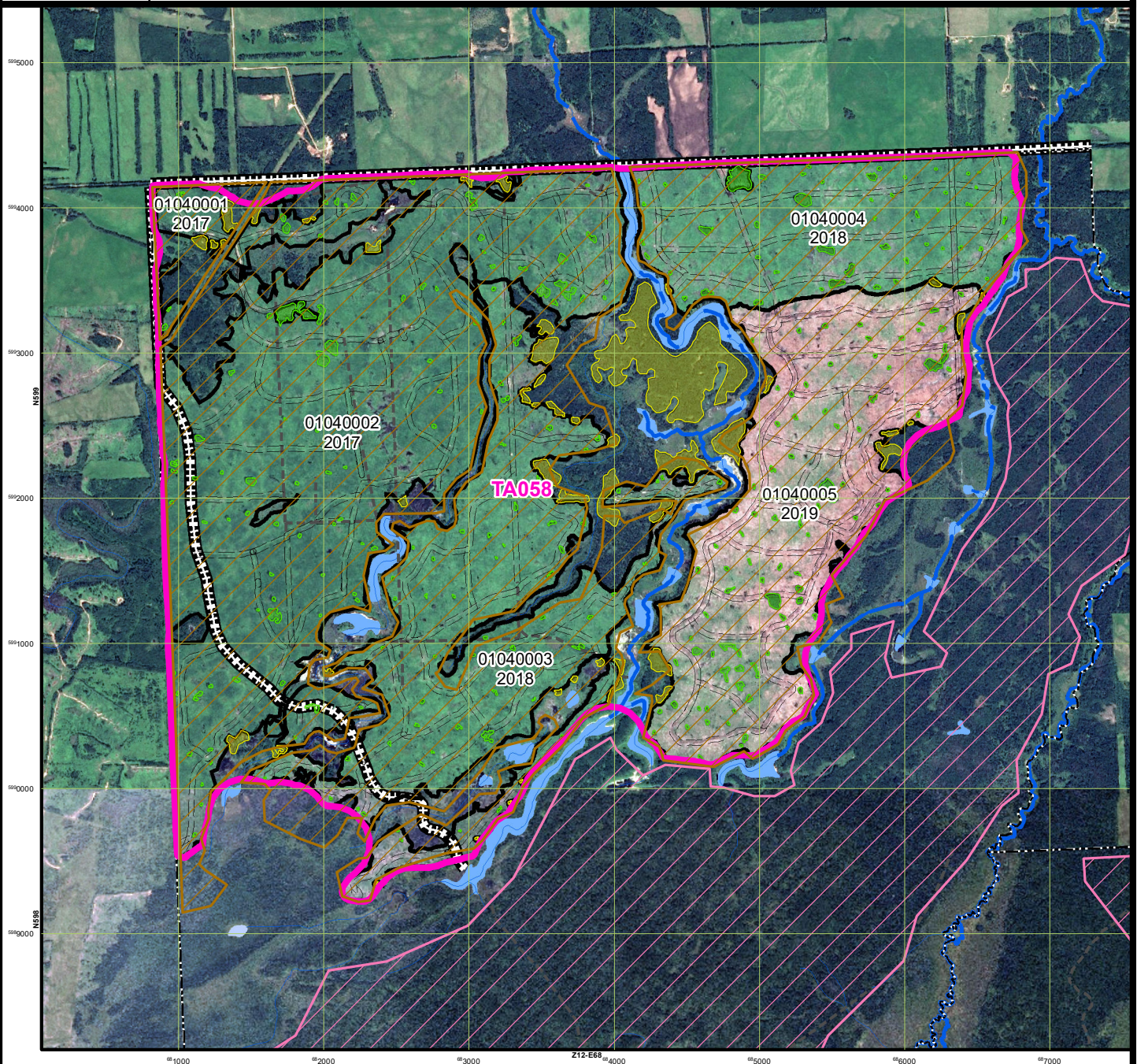
silvacom™

Map Version: 1.00
Map Date: April 28, 2022
Map Production: Silvacom Ltd.
Silvacom Ref: E-206
Map File: ...maps\HarvestEventMap.mxd



1:41,000

0 410 820 1,640
Metres



Features of Interest

- █ Harvest Events
- █ Harvested Blocks
- █ Insular Retention
- █ Proximal Retention

Tactical Plan

- █ T1
- █ T2

Roads

- Paved Road
- Gravel Road
- Class 1 (FRR)
- Class 2 (IBR)
- Class 3 (Bush Road)
- Class 4 (Bush Road)
- Non-Mistik
- Oil / Gas
- 3rd Party
- Trail

Water

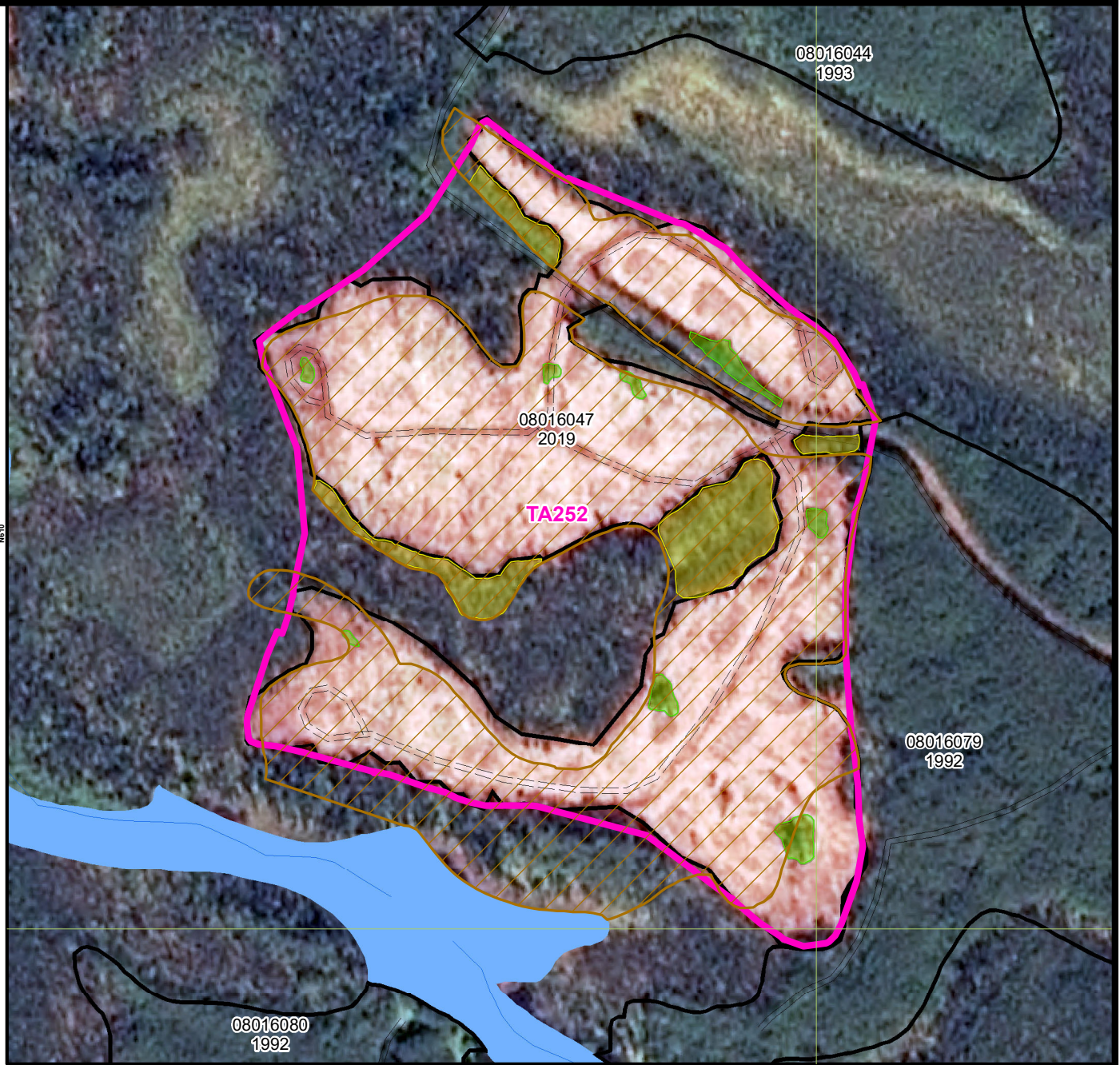
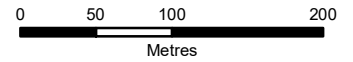
- █ Lake / River
- █ River
- █ Perennial
- █ Intermittent
- █ Indefinite
- █ Flooded Land
- █ Aquatic Regime

HARVEST EVENT MAP

EVENT NUMBER: TA252



1:5,000



Features of Interest

- Harvest Events
- Harvested Blocks
- Insular Retention
- Proximal Retention

Tactical Plan

- T1
- T2

Roads

- Paved Road
- Gravel Road
- Class 1 (FRR)
- Class 2 (IBR)
- Class 3 (Bush Road)
- Class 4 (Bush Road)
- Non-Mistik
- Oil / Gas
- 3rd Party
- Trail

Water

- Lake / River
- River
- Perennial
- Intermittent
- Indefinite
- Flooded Land
- Aquatic Regime

HARVEST EVENT MAP

EVENT NUMBER: TA249



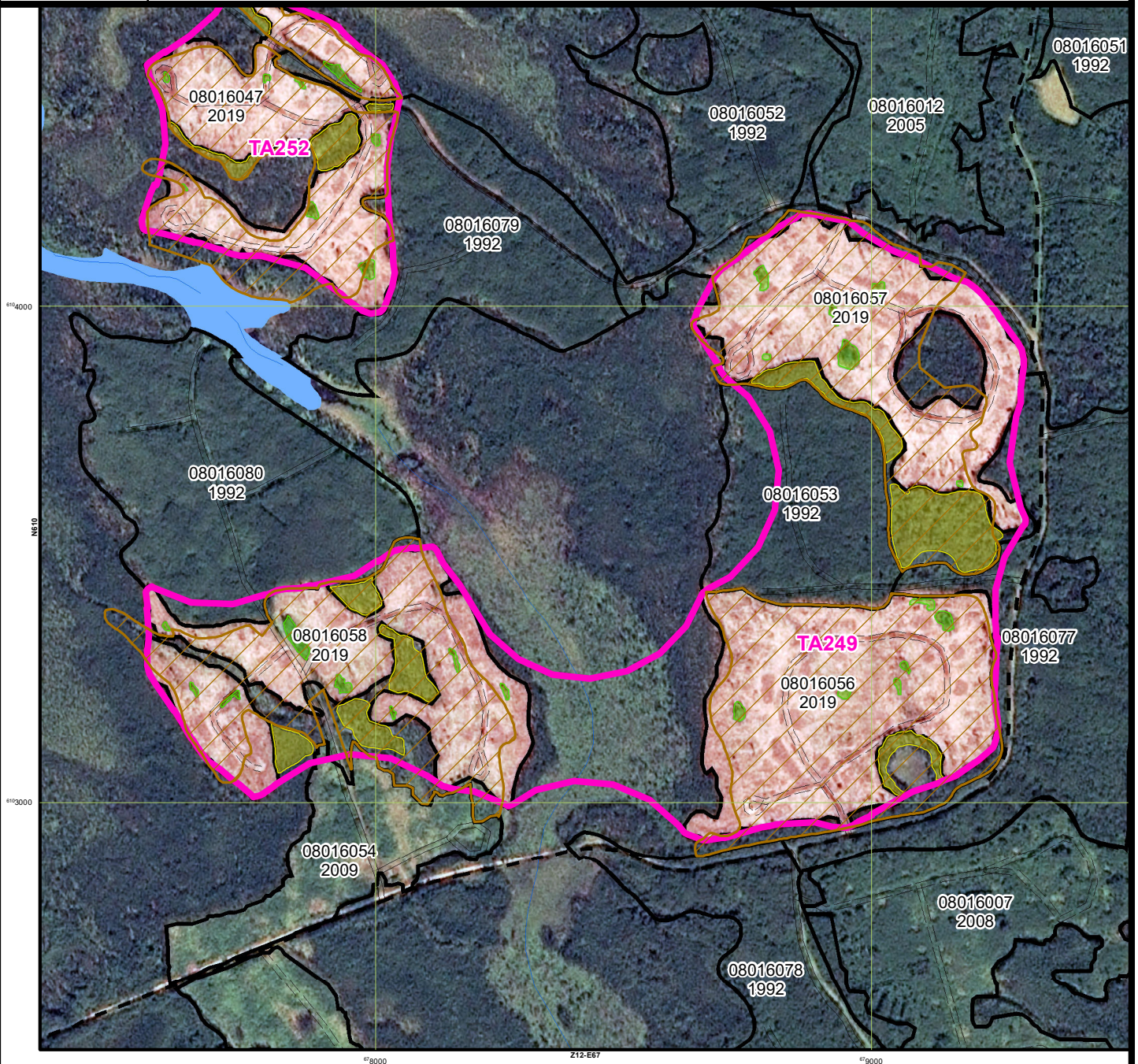
silvacom™

Map Version: 1.00
Map Date: April 28, 2022
Map Production: Silvacom Ltd.
Silvacom Ref: E-206
Map File: ...maps\HarvestEventMap.mxd



1:12,000

0 120 240 480
Metres



Features of Interest

- █ Harvest Events
- █ Harvested Blocks
- █ Insular Retention
- █ Proximal Retention

Tactical Plan

- █ T1
- █ T2

Roads

- █ Paved Road
- █ Gravel Road
- █ Class 1 (FRR)
- █ Class 2 (IBR)
- █ Class 3 (Bush Road)
- █ Class 4 (Bush Road)
- █ Non-Mistik
- █ Oil / Gas
- █ 3rd Party
- █ Trail

Water

- █ Lake / River
- █ River
- █ Perennial
- █ Intermittent
- █ Indefinite
- █ Flooded Land
- █ Aquatic Regime