



MISTIK MANAGEMENT LTD.

SEPTEMBER 2024

# 2022/2023 ANNUAL CERTIFICATION REPORT



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



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# **Mistik Management Ltd. Annual Certification Report 2022/23 Operating Year**

for the  
Meadow Lake Timber Supply Area and Glaslyn Timber Supply Area

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23 Sep 2024



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## 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 (“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 and 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 areas. 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.

Mistik is required to track specific values, objectives, indicators, and targets that meet the Canadian Standards Association (CSA) Sustainable Forest Management Plan content requirements specified in the CAN/CSA-Z809 -16 Sustainable Forest Management Standard. In collaboration with our Public Advisory Group, we have established a sustainable forest management system accordingly.

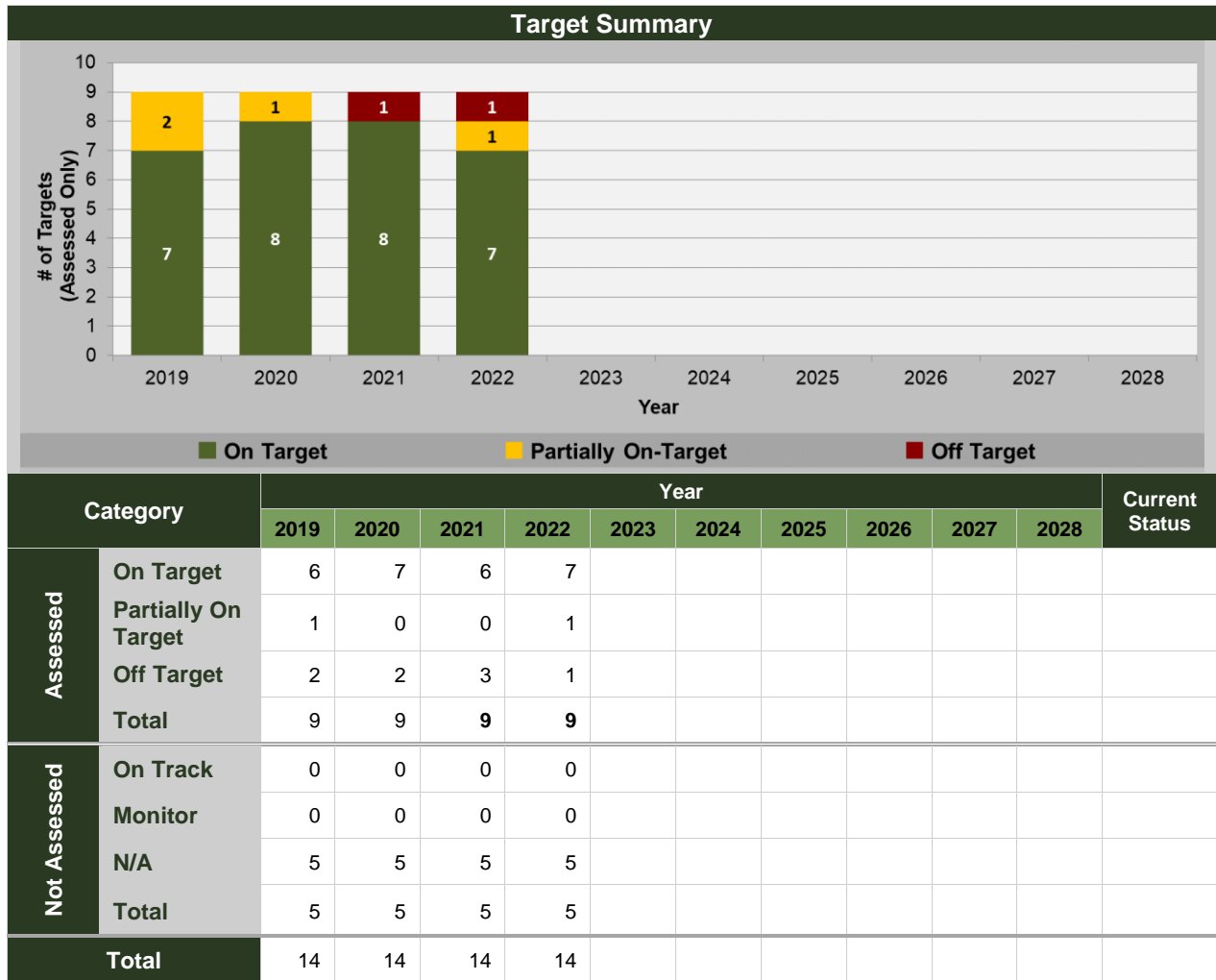
Mistik is also certified to the FSC National Forest Stewardship Standard of Canada which represents the Canadian adaptation of FSC International’s Global Principles, Criteria, and International Generic Indicators. The national adaptation of this international framework ensures that the specific standard requirements are locally relevant, applicable, and workable, as well as guaranteeing its integrity across the broader FSC system. Standard requirements from the 10 FSC Principles are measured, tracked, and documented through management control over activities occurring in the forest.

Annual reporting is required under both provincial legislation and certification programs. This information can be found in two documents:

1. Mistik Management Ltd. 2019-2039 20-year Forest Management Plan – Annual Report. This document includes reporting information on items that are required under both the FMP and certification programs.
2. Mistik Management Ltd. Annual Certification Report. This document includes information that is not required in the FMP but is required under Mistik’s certification programs.

Both documents can be found on Mistik’s website (<https://www.mistik.ca/forest-management/2019-fmp>).

### 3 CERTIFICATION TARGET SUMMARY

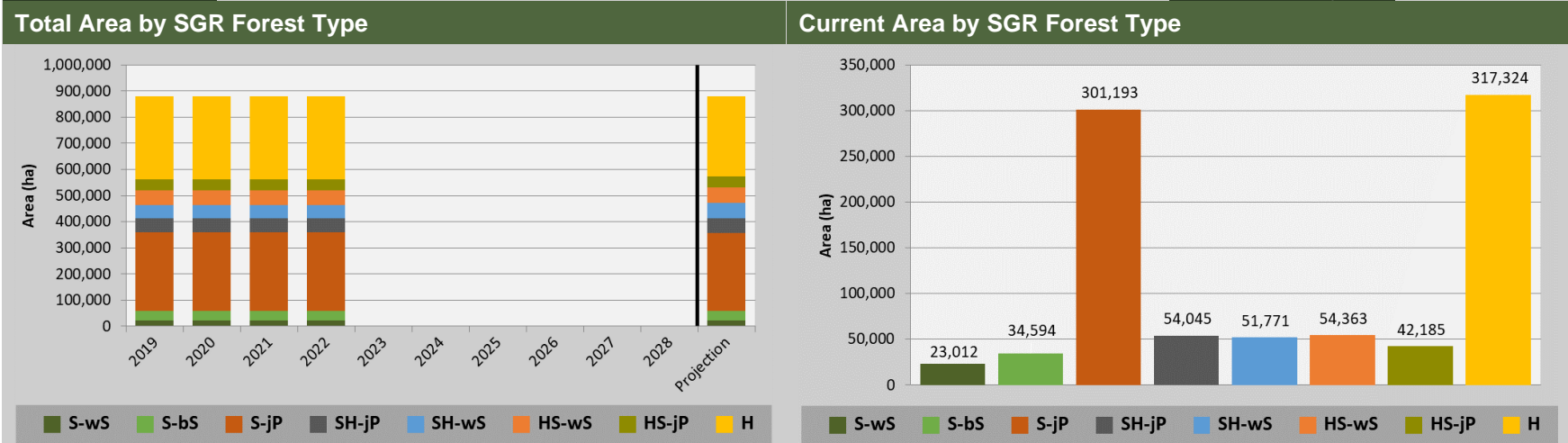


### 4 CERTIFICATION TARGETS

Reporting Item	Description	Status (Parts)	Reporting Cycle	Assessment Cycle	Next Assessment Year	Location
Indicator #C-1	Proportion of SGR Forest Type area	Not Assessed (N/A)	Annual	N/A	N/A	Page 6.
Indicator #C-2	Operable Growing stock by SGR Forest Type (hardwood and softwood)	Not Assessed (N/A)	Annual	N/A	N/A	Page 7.

Reporting Item	Description	Status (Parts)	Reporting Cycle	Assessment Cycle	Next Assessment Year	Location
Indicator #C-3	Harvest volume by SGR Forest Type (hardwood and softwood)	Not Assessed (N/A)	Annual	N/A	N/A	Page 11.
Indicator #C-4	Percent of vegetation restoration species and seed mixes used in erosion control that are recommended by the province	On Target	Annual	Annual	Annual	Page 14.
Indicator #C-5	Insular retention area associated with harvest disturbance events	Partially on Target	Annual	Annual	Annual	Page 15.
Indicator #C-6	Number of advertisements made in local newspapers	On Target	Annual	Annual	Annual	Page 18.
Indicator #C-7	% of contractors who have received environmental and sustainable forest management awareness training	Off Target	Annual	Annual	Annual	Page 19.
Indicator #C-8	Map of known Woodland Caribou sightings	On Target	Annual	Annual	Annual	Page 20.
Indicator #C-9	Annual contributions to field monitoring of Woodland Caribou	On Target	Annual	Annual	Annual	Page 21.
Indicator #C-10	Level of downed woody debris	On Target (2/2)	Annual	Annual	Annual	Page 22.
Indicator #C-11	Net carbon (C) uptake	On Target	Annual	Annual	Annual	Page 24.
Indicator #C-12	Total area of natural disturbances (fire)	Not Assessed (N/A)	Annual	N/A	N/A	Page 27.
Indicator #C-13	Levels of employment	Not Assessed (N/A)	Annual	N/A	N/A	Page 28.
Indicator #C-14	Total person-days of work retained by persons of Aboriginal descent	On Target	Annual	Annual	Annual	Page 29.

<b>Indicator #C-1</b>	<b>Proportion of SGR Forest Type Area</b>	<b>Status</b>	<b>Not Assessed (N/A)</b>
<b>Target #C-1</b>	N/A	<b>Reporting Cycle</b>	<b>Annual</b>
		<b>Assessment Cycle</b>	<b>N/A</b>



Area (ha) by SGR Forest Type	Year of Measurement										Current Status	10-Year FMP Projection
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
S-wS	23,012	23,012	23,012	23,012							23,012	23,383
S-bS	34,594	34,594	34,594	34,594							34,594	34,466
S-jP	301,193	301,191	301,191	301,191							301,191	298,192
SH-jP	54,045	54,045	54,045	54,045							54,045	56,712
SH-wS	51,771	51,771	51,771	51,771							51,771	59,996
HS-wS	54,361	54,361	54,361	54,361							54,361	59,565
HS-jP	42,185	42,185	42,185	42,185							42,185	40,778
H	317,310	317,287	317,277	317,277							317,277	305,417
<b>Total</b>	<b>878,471</b>	<b>878,446</b>	<b>878,436</b>	<b>878,436</b>							<b>878,436</b>	<b>878,510</b>

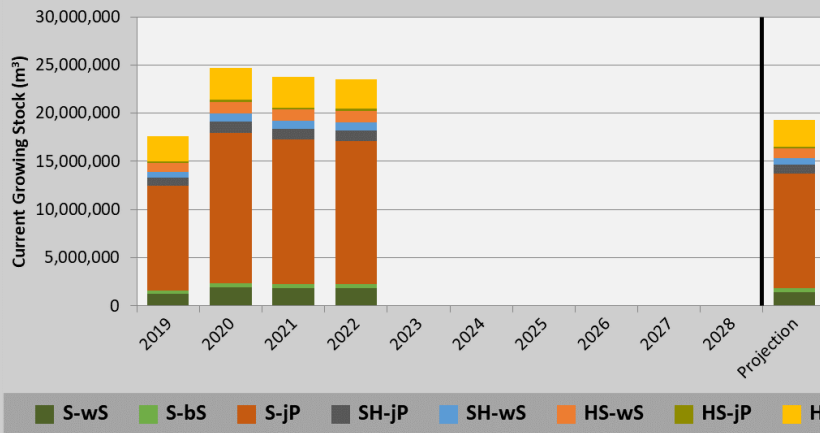
**Comments**

- The 10-year FMP Projection is a prediction only and should not be considered a target.
- Note that the total area slightly decreases over time due to landbase withdrawals (for example through the construction of permanent roads)
- 2019 and 2020 areas have been adjusted for incorrect road buffers being applied (see FMP Annual Report, Indicator #10)

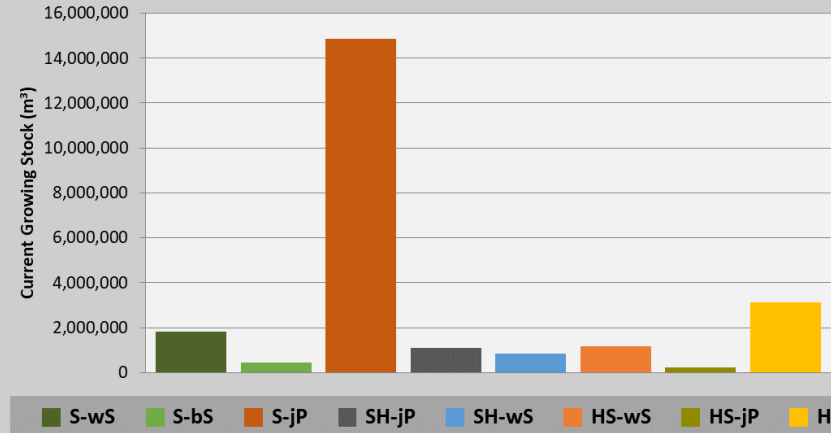
<b>Indicator #C-2</b>	<b>Operable Growing Stock by SGR Forest Type Area (Hardwood and Softwood)</b>	<b>Status</b>	<b>Not Assessed (N/A)</b>
<b>Target #C-2</b>	N/A	<b>Reporting Cycle</b>	<b>Annual</b>
		<b>Assessment Cycle</b>	<b>N/A</b>

## Part 1 - Softwood

**Total Operable Growing Stock by SGR Forest Type**



**Current Operable Growing Stock by SGR Forest Type**



Volume (m³) by SGR Forest Type	Year of Measurement										Current Status	10-Year FMP Projection
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
S-wS	1,279,668	1,923,290	1,856,853	1,830,972							1,830,972	1,401,559
S-bS	273,821	443,474	429,091	428,795							428,795	405,758
S-jP	10,893,247	15,586,614	14,972,021	14,878,024							14,878,024	11,941,292
SH-jP	822,514	1,161,281	1,086,858	1,082,104							1,082,104	942,147
SH-wS	614,980	861,200	843,121	834,115							834,115	635,745
HS-wS	929,005	1,209,979	1,166,812	1,150,777							1,150,777	985,073
HS-jP	189,410	243,096	230,794	229,042							229,042	188,561
H	2,573,973	3,287,714	3,142,665	3,106,048							3,106,048	2,787,602
<b>Total</b>	<b>17,576,619</b>	<b>24,716,649</b>	<b>23,728,216</b>	<b>23,539,878</b>							<b>23,539,878</b>	<b>19,287,737</b>



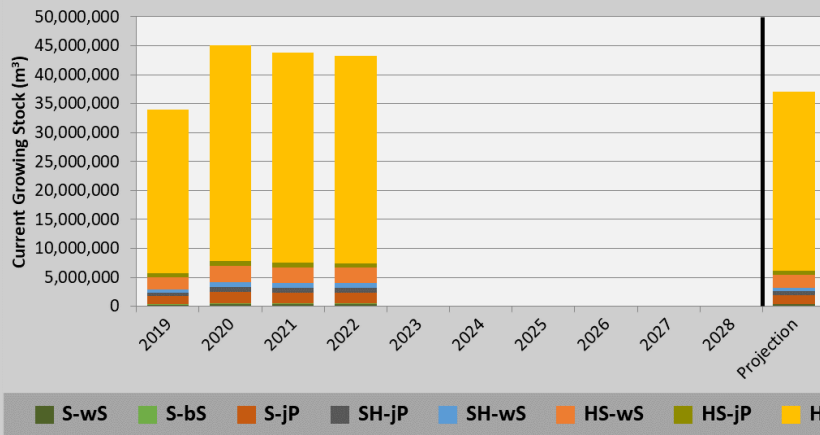
**Comments**

- The 10-year FMP Projection is a prediction only and should not be considered a target.
- “Operable Growing Stock” refers to the amount of timber volume available, at the current time period, within each SGR Forest Type above the minimum harvest age (100 for S-WS/S-BS, 90 for SH-WS, 80 for HS-JP/HS-WS/SH-JP, and 70 for S-JP/H stands). Some softwood growing stock can be found in hardwood stands, and vice versa, due to incidental volume present (e.g., a deciduous stand with a small conifer component).
- Large differences in growing stock between 2019 and 2020 are largely caused by the aging of stands within the landbase, 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), resulting in large amounts of area becoming operable in 2020, as well as an increase in volume for all stands (as volumes are also assigned based on 10-year age classes).
- The reduction in growing stock in 2021 is due mostly to wildfires occurring in this year.

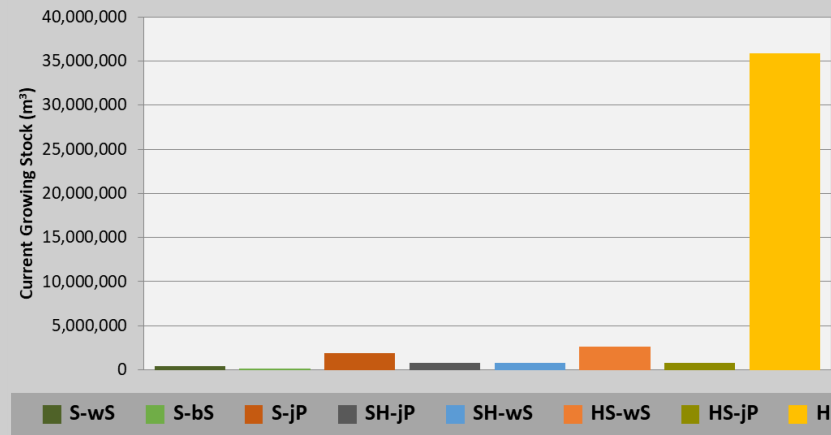
<b>Indicator #C-2</b>	<b>Operable Growing Stock by SGR Forest Type Area (Hardwood and Softwood)</b>	<b>Status</b>	<b>Not Assessed (N/A)</b>
<b>Target #C-2</b>	N/A	<b>Reporting Cycle</b>	<b>Annual</b>
		<b>Assessment Cycle</b>	<b>N/A</b>

## Part 2 - Hardwood

**Total Operable Growing Stock by SGR Forest Type**



**Current Operable Growing Stock by SGR Forest Type**



Volume (m³) by SGR Forest Type	Year of Measurement										Current Status	10-Year FMP Projection
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
S-wS	281,186	420,001	405,945	400,085							400,085	306,959
S-bS	72,761	118,936	115,226	115,147							115,147	108,979
S-jP	1,356,780	1,953,517	1,877,653	1,867,318							1,867,318	1,488,186
SH-jP	642,801	891,621	834,502	830,864							830,864	724,048
SH-wS	573,029	804,949	787,872	779,480							779,480	594,096
HS-wS	2,148,876	2,768,316	2,672,013	2,635,010							2,635,010	2,278,421
HS-jP	689,667	874,189	830,052	823,619							823,619	675,006
H	28,187,921	37,210,342	36,292,101	35,822,326							35,822,326	30,882,801
<b>Total</b>	<b>33,953,021</b>	<b>45,041,870</b>	<b>43,815,364</b>	<b>43,273,850</b>							<b>43,273,850</b>	<b>37,058,496</b>

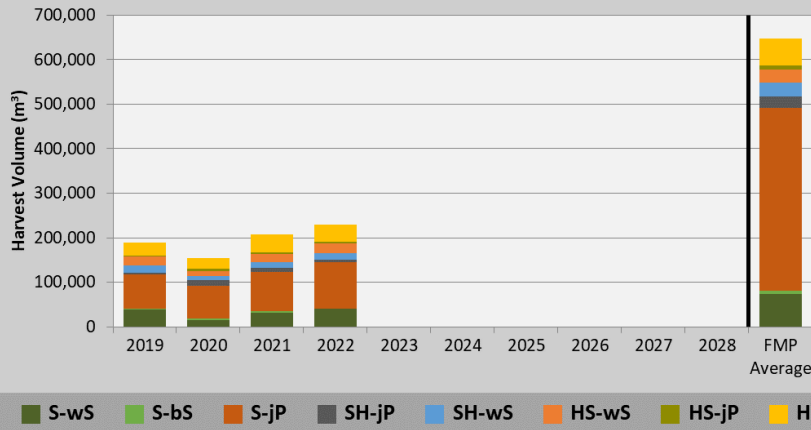
**Comments** • The 10-year FMP Projection is a prediction only and should not be considered a target.

- “Operable Growing Stock” refers to the amount of timber volume available, at the current time period, within each SGR Forest Type above the minimum harvest age (100 for S-WS/S-BS, 90 for SH-WS, 80 for HS-JP/HS-WS/SH-JP, and 70 for S-JP/H stands). Some softwood growing stock can be found in hardwood stands, and vice versa, due to incidental volume present (e.g., a deciduous stand with a small conifer component).
- Large differences in growing stock between 2019 and 2020 are largely caused by the aging of stands within the landbase, 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), resulting in large amounts of area becoming operable in 2020, as well as an increase in volume for all stands (as volumes are also assigned based on 10-year age classes).
- The reduction in growing stock in 2021 is due mostly to wildfires occurring in this year

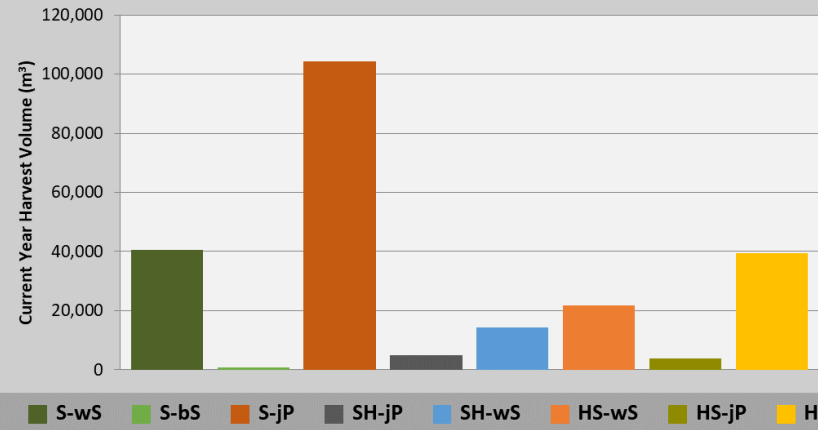
<b>Indicator #C-3</b>	<b>Harvest Volume by SGR Forest Type Area (Hardwood and Softwood)</b>	<b>Status</b>	<b>Not Assessed (N/A)</b>
<b>Target #C-3</b>	N/A	<b>Reporting Cycle</b>	<b>Annual</b>
		<b>Assessment Cycle</b>	<b>N/A</b>

**Part 1 - Softwood**

**Total Harvest Volume by SGR Forest Type**



**Current Year Harvest Volume by SGR Forest Type**



Harvest Volume (m³) by SGR Forest Type	Year of Measurement										Current Status	10-Year FMP Average
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
S-wS	38,900	15,177	31,114	40,393							40,393	74,357
S-bS	1,510	2,716	4,114	849							849	7,092
S-jP	76,428	74,352	87,450	104,340							104,340	409,597
SH-jP	4,353	12,276	9,674	4,859							4,859	25,570
SH-wS	16,279	9,575	12,132	14,301							14,301	30,847
HS-wS	19,652	11,536	19,291	21,715							21,715	30,542
HS-jP	1,948	5,702	2,911	3,908							3,908	7,918
H	30,583	23,734	41,178	39,424							39,424	61,508
<b>Total</b>	<b>189,652</b>	<b>155,067</b>	<b>207,864</b>	<b>229,789</b>							<b>229,789</b>	<b>647,430</b>
<b>Comments</b>	<ul style="list-style-type: none"> <li>The 10-year FMP Average is a prediction only and should not be considered a target.</li> </ul>											



# 2022/23 ANNUAL CERTIFICATION REPORT

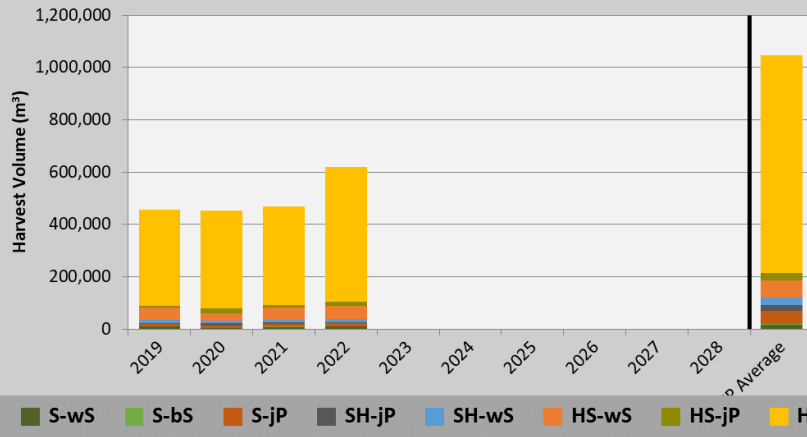
PROJECT #F-266  
SEPTEMBER 2024

- These volumes are estimates based on FMP yield curves, not actual harvested volumes, as these are not tracked to the stand inventory level. Actual harvested polygons are used to identify the amount of each stand type harvested on the landbase, and FMP average yield projections are applied to these areas to generate predicted volumes by stand type.

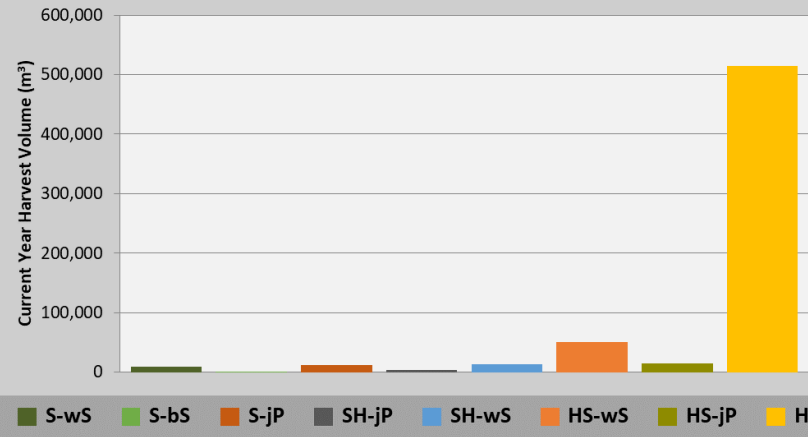
<b>Indicator #C-3</b>	<b>Harvest Volume by SGR Forest Type Area (Hardwood and Softwood)</b>	<b>Status</b>	<b>Not Assessed (N/A)</b>
<b>Target #C-3</b>	N/A	<b>Reporting Cycle</b>	<b>Annual</b>
		<b>Assessment Cycle</b>	<b>N/A</b>

## Part 2 - Hardwood

### Total Harvest Volume by SGR Forest Type



### Current Year Harvest Volume by SGR Forest Type



Harvest Volume (m³) by SGR Forest Type	Year of Measurement										Current Status	10-Year FMP Average
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
S-wS	10,151	3,850	7,294	9,574							9,574	16,941
S-bS	326	480	776	167							167	1,553
S-jP	7,345	8,426	9,762	11,572							11,572	51,525
SH-jP	3,591	10,054	7,574	3,727							3,727	19,849
SH-wS	14,182	8,383	10,748	12,937							12,937	28,375
HS-wS	46,232	27,417	44,190	51,094							51,094	68,577
HS-jP	5,047	20,710	10,274	14,099							14,099	28,400
H	369,003	373,412	377,634	514,634							514,634	831,435
<b>Total</b>	<b>455,878</b>	<b>452,732</b>	<b>468,254</b>	<b>617,805</b>							<b>617,805</b>	<b>1,046,653</b>

**Comments**

- The 10-year FMP Projection is a prediction only and should not be considered a target.
- These volumes are estimates based on FMP yield curves, not actual harvested volumes, as these are not tracked to the stand inventory level. Actual harvested polygons are used to identify the amount of each stand type harvested on the landbase, and FMP average yield projections are applied to these areas to generate predicted volumes by stand type.

<b>Indicator #C-4</b>	<b>Percent of vegetation restoration species and seed mixes used in erosion control that are recommended by the province</b>										<b>Status</b>	<b>On Target</b>
<b>Target #C-4</b>	On an annual basis, 100% of seed mixes used in erosion control projects shall be from provincially recommended seed mixes.										<b>Reporting Cycle</b>	<b>Annual</b>
											<b>Assessment Cycle</b>	<b>Annual</b>

Year	Actual (On Target)	Actual (Off Target)	Target
2019	100%	0%	100%
2020	100%	0%	100%
2021	100%	0%	100%
2022	100%	0%	100%
2023	0%	0%	100%
2024	0%	0%	100%
2025	0%	0%	100%
2026	0%	0%	100%
2027	0%	0%	100%
2028	0%	0%	100%
Target	100%	0%	100%

Category	Year of Measurement										Current Status	Target	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
% of spp. mixes used that are recommended by the province	100%	100%	100%	100%								100%	100%

<b>Variance</b>	No acceptable variance.											
<b>Comments</b>	<ul style="list-style-type: none"> <li>Mistik uses only provincially recommended vegetation restoration species and seed mixes in its erosion control programs.</li> </ul>											

## Indicator #C-5

### Insular retention area associated with harvest blocks

Status

On Target

## Target #C-5

For the Mistik FMA and L&M areas, based on an annual minimum sample of 10% of the number of harvested blocks (typically one block per management unit): a.) The total area of merchantable timber left as retention (including islands, clumps, and dispersed residuals) will be greater than or equal to 5% of the harvested area on average, with a target range of 2 – 20% for individual blocks. b.) An average of 2 trees per hectare in merchantable dispersed residuals will be maintained.

Reporting Cycle

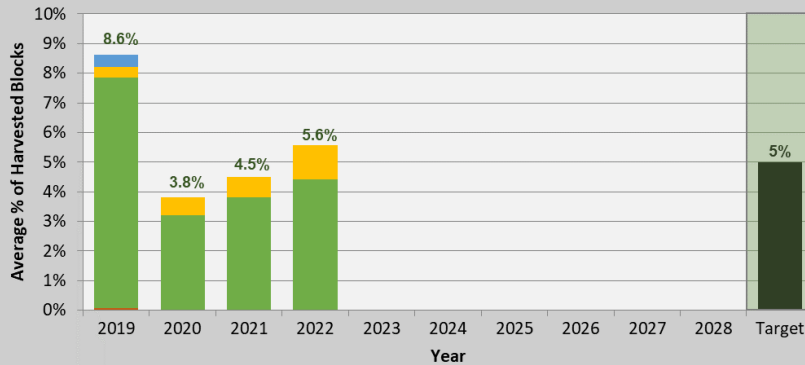
Annual

Assessment Cycle

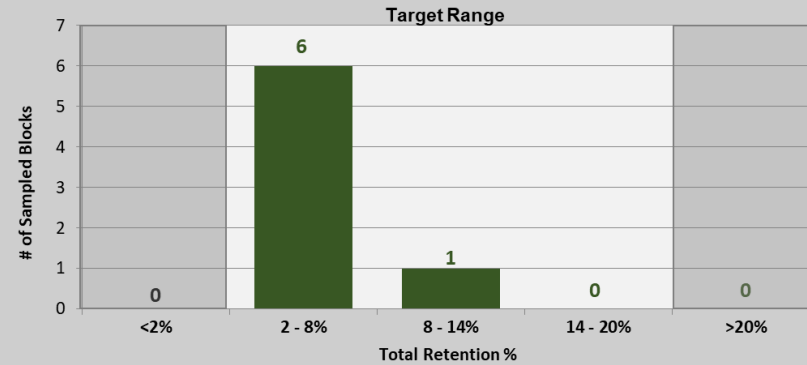
Annual

## Part 1 – Total Retention (All types)

### Average Retention %, by Type



### Current Blocks, by Total Retention %



Dispersed Clump Island Peninsular Target

Current (On Target) Current (Off Target)

Harvested Block Area, by Category	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Dispersed Residuals (Avg. %)	0.1%	0.0%	0.0%	0.0%							0.2%	N/A
Clumps (Avg. %)	7.8%	3.2%	3.8%	4.4%							4.4%	N/A
Islands (Avg. %)	0.4%	0.6%	0.7%	1.1%							1.1%	N/A
Peninsular Retention (Avg. %)	0.4%	0.0%	0.0%	0.0%							0.0%	N/A
<b>Total (Avg. %)</b>	8.6%	3.8%	4.5%	5.6%							5.6%	≥ 5%
<b>Total (% Range)</b>	3.3 - 14.0%	1.8 - 6.8%	1.7 - 6.3%	3.2 - 8.9%							3.2- 8.9%	2 - 20%
<b>Variance</b>	No acceptable variance.											



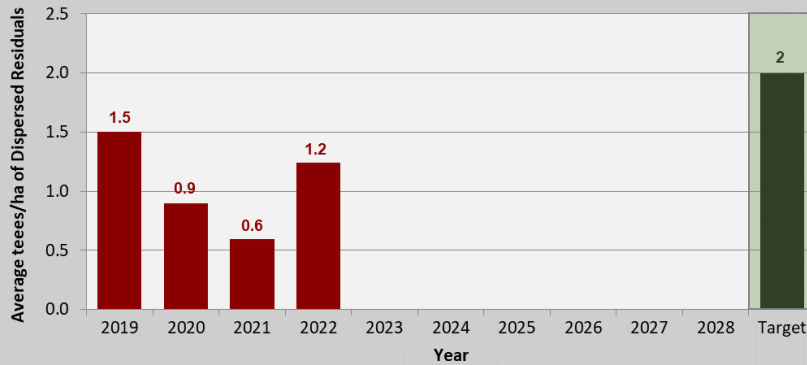
**Comments**

- Assessments are completed using a combination of satellite imagery delineation and onsite field verification of each block.
- 7 blocks from MUs 01, 02, 03, 04, 07, 08, and 85 were sampled from the 2022-23 timber year, with a combined area of 634 ha.
- Types of retention are defined as follows:
  - “Dispersed Residual” = Groups of up to 4 trees of merchantable size (alive or dead)
  - “Clump” = Groups of 5 or more trees, less than 1 ha in size
  - “Island” = 1 ha or greater in size
  - “Peninsular Retention” = riparian area within blocks (i.e., not along boundary) associated with ephemeral watercourses.
- Since individual trees have minimal impact in hectares, the area percentage for Dispersed Residual does not truly reflect the company's efforts. The Indicator C-5, Part 2 better represents this item.

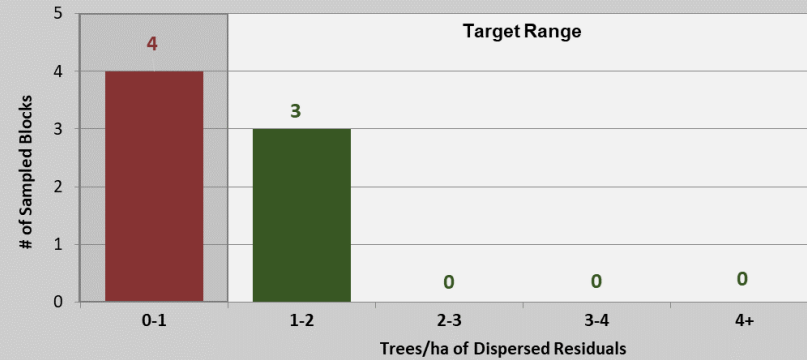
<b>Indicator #C-5</b>	<b>Insular retention area associated with harvest blocks</b>	<b>Status</b>	<b>Off Target</b>
<b>Target #C-5</b>	For the Mistik FMA and L&M areas, based on an annual minimum sample of 10% of the number of harvested blocks (typically one block per management unit): a.) The total area of merchantable timber left as retention (including islands, clumps, and dispersed residuals) will be greater than or equal to 5% of the harvested area on average, with a target range of 2 – 20% for individual blocks. b.) An average of 2 trees per hectare in merchantable dispersed residuals will be maintained.	<b>Reporting Cycle</b>	<b>Annual</b>
		<b>Assessment Cycle</b>	<b>Annual</b>

## Part 2 – Dispersed Residuals

### Average Density of Dispersed Residuals



### Current Blocks, by Trees/Ha of Dispersed Residuals



■ Actual (On Target)	■ Actual (Off Target)	■ Target	■ Current (On Target)	■ Current (Off Target)
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Category	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Average trees/ha of dispersed residuals (Live)	0.8	0.7	0.5	1.0							1.0	N/A
Average trees/ha of dispersed residuals (Dead)	0.7	0.2	0.1	0.2							0.2	N/A
<b>Average trees/ha of dispersed residuals (Total)</b>	1.5	0.9	0.6	1.2							1.2	2.0

**Variance** No acceptable variance.

- Comments**
- Assessments are completed using a combination of satellite imagery delineation and onsite field verification of each block.
  - 7 blocks from MUs 01, 02, 03, 04, 07, 08, and 85 were sampled from the 2022-23 timber year, with a combined area of 634 ha .
  - “Dispersed Residual” = Groups of up to 4 trees of merchantable size (alive or dead).
  - 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.

<b>Indicator #C-6</b>	<b>Number of advertisements made in local newspapers advising the public of the opportunity to report on perceived forestry non-compliances and activities that threaten environmental or other values.</b>	<b>Status</b>	<b>On Target</b>
<b>Target #C-6</b>	On an annual basis, one advertisement will be published in the local newspaper.	<b>Reporting Cycle</b>	<b>Annual</b>
		<b>Assessment Cycle</b>	<b>Annual</b>



Category	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Number of advertisements made in local newspapers	1	2	2	2							2	1
<b>Variance</b>	No acceptable variance.											
<b>Comments</b>	<ul style="list-style-type: none"> <li>Two articles were published in the newspaper Northern Pride in 2021/2022.</li> </ul>											

## Indicator #C-7

**Percent of Mistik contractors who have received annual environmental and sustainable forest management awareness training**

**Status**

**Off Target**

## Target #C-7

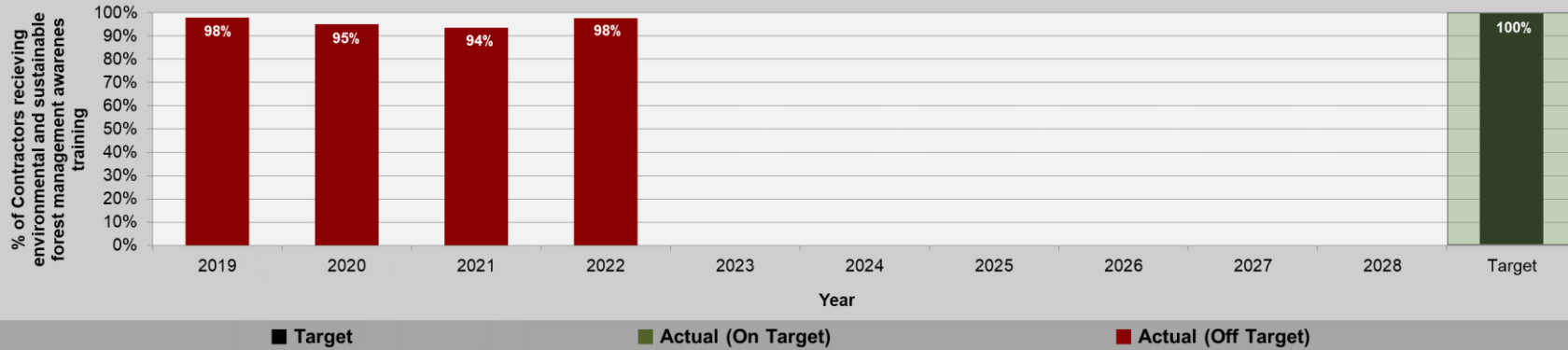
On an annual basis, achieve environmental and sustainable forest management awareness training of 100% of Mistik's forestry contractors.

**Reporting Cycle**

**Annual**

**Assessment Cycle**

**Annual**



Category	Year of Measurement										Current Status	Target	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
% of contractors receiving environmental and sustainable forest management training	98%	95%	94%	98%								98%	100%

### Variance

No acceptable variance.

### Comments

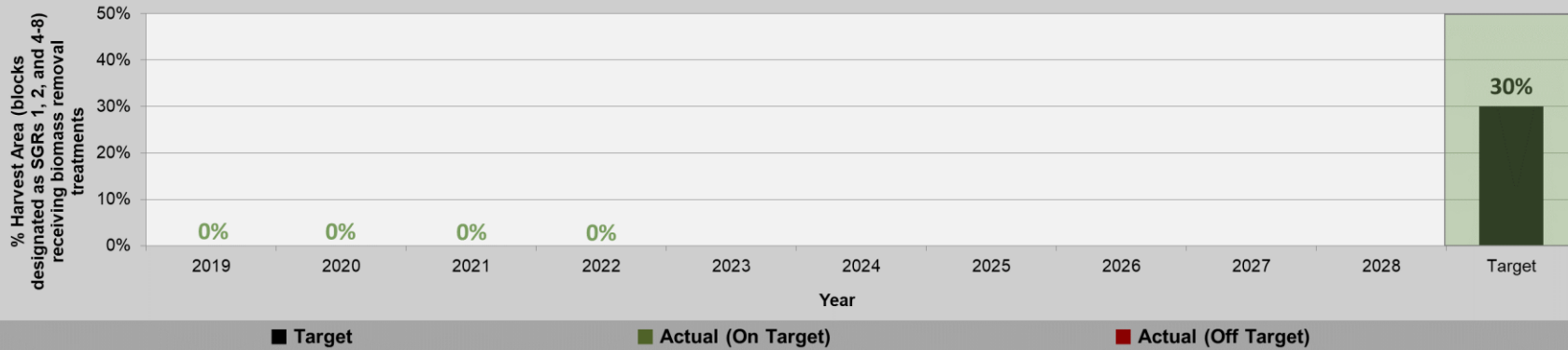
- One contractor did not have a record of EMS training in 2022 (i.e., contractor may have received training but lacked documentation of it).

<b>Indicator #C-8</b>	<b>Map of known Woodland Caribou sightings</b>									<b>Status</b>	<b>On Target</b>
<b>Target #C-8</b>	On an annual basis, maintain a GIS map product of all known sightings of Woodland Caribou within the Mistik FMA area.									<b>Reporting Cycle</b>	Annual
										<b>Assessment Cycle</b>	Annual
<b>Category</b>	<b>Year of Measurement</b>										
	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	
Number of New Additions	2	3	3	10							
Map Produced?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<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"/>	
<b>Variance</b>	No acceptable variance.										
<b>Comments</b>	<ul style="list-style-type: none"> <li>See attached Caribou Sightings Map.</li> </ul>										

<b>Indicator #C-9</b>	<b>Annual contributions to field monitoring of Woodland Caribou</b>								<b>Status</b>	<b>On Target</b>
<b>Target #C-9</b>	On an annual basis, contribute funding to aid in field monitoring caribou populations within the Mistik FMA area or implement a limited Mistik field monitoring program.								<b>Reporting Cycle</b>	<b>Annual</b>
									<b>Assessment Cycle</b>	<b>Annual</b>
<b>Category</b>	<b>Year of Measurement</b>									
	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
Contribution (\$/recipient)	\$0	\$773.54	\$10,000	\$610.00						
Contributions Met?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<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"/>
<b>Variance</b>	No acceptable variance.									
<b>Comments</b>	<ul style="list-style-type: none"> <li>Mistik has deployed a series of high-quality game cameras to capture images and/or video of significant species (species at risk, species of interest and study species). The cameras are set up at key seasonal locations in an attempt to record species numbers, condition, and direction of travel. Cameras are checked on a semi-regular basis (2-3 months) to limit potential disturbance.</li> </ul>									

<b>Indicator #C-10</b>	<b>Level of downed woody debris</b>	<b>Status</b>	<b>On Target</b>
<b>Target #C-10</b>	On an annual basis: 1.) Less than 30% (with an upper limit of 40%) of the annual harvest area of harvest blocks designated as SGRs #1, #2, and #4-8 shall be impacted by biomass removal operations, and 2.) 0% of jack pine (SGR #3) shall be impacted by biomass removal operations.	<b>Reporting Cycle</b>	<b>Annual</b>
		<b>Assessment Cycle</b>	<b>Annual</b>

**Part 1: SGRs #1, #2, and #4-8**



Category	Year of Measurement										Current Status	Acceptable Range
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
% of annual harvest area (SGRs #1, #2, and #4-8) impacted by biomass removal operations	0%	0%	0%	0%							0%	0 - 40%
<b>Variance</b>	10% acceptable variance (Target: <30%, Acceptable range: 0 - 40%)											
<b>Comments</b>	<ul style="list-style-type: none"> <li>There were no biomass removal operations in the 2022 operating year.</li> </ul>											

<b>Indicator #C-10</b>	<b>Level of downed woody debris</b>	<b>Status</b>	<b>On Target</b>
<b>Target #C-10</b>	On an annual basis: 1.) Less than 30% (with an upper limit of 40%) of the annual harvest area of harvest blocks designated as SGRs #1, #2, and #4-8 shall be impacted by biomass removal operations, and 2.) 0% of jack pine (SGR #3) shall be impacted by biomass removal operations.	<b>Reporting Cycle</b>	<b>Annual</b>
		<b>Assessment Cycle</b>	<b>Annual</b>

### Part 2: SGR #3 (Jack Pine)



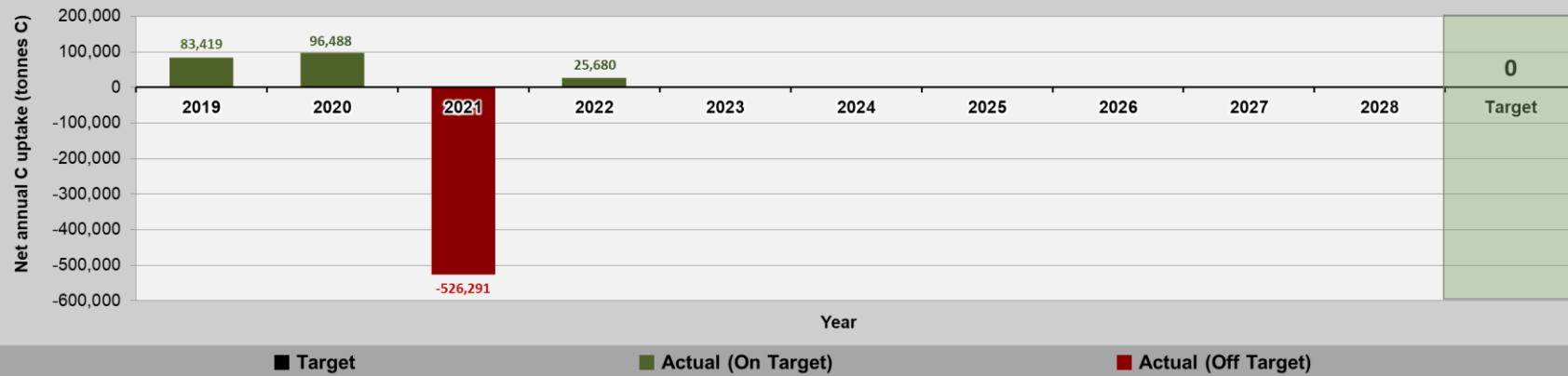
Category	Year of Measurement										Current Status	Target	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
% of annual harvest area (SGR #3) impacted by biomass removal operations	0%	0%	0%	0%								0%	0%

<b>Variance</b>	No acceptable variance.
<b>Comments</b>	<ul style="list-style-type: none"> <li>There were no biomass removal operations in the 2022 operating year.</li> </ul>



<b>Indicator #C-11</b>	<b>Net carbon (C) uptake</b>	<b>Status</b>	<b>On Target</b>
<b>Target #C-11</b>	Of the net productive landbase of the Mistik FMA area, net carbon uptake shall be $\geq 0$ tonnes on an annual basis.	<b>Reporting Cycle Assessment Cycle</b>	Annual Annual

### Part 1: Upland



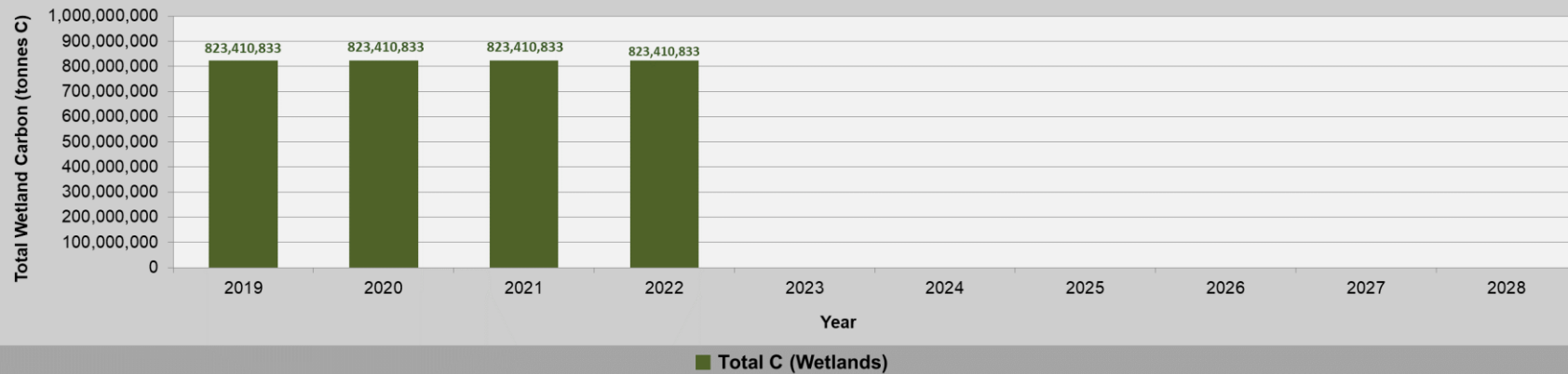
Category	Year of Measurement											Current Status	Target	
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
Estimated Ecosystem C (tonnes)	233,230,281	233,335,747	233,452,540	232,950,348	233,003,655								233,003,655	N/A
Annual C Uptake (tonnes)	N/A	105,466	116,794	-502,193	53,307								53,307	N/A
Emissions from Forest Operations (tonnes)	N/A	22,046	20,305	24,098	27,627								27,627	N/A
Net Annual C Uptake (tonnes)	N/A	83,419	96,488	-526,291	25,680								25,680	$\geq 0$

<b>Variance</b>	No acceptable variance.
<b>Comments</b>	<ul style="list-style-type: none"> <li>Net Annual C Uptake is calculated as the annual C accumulation, less emissions from forest operations.</li> <li>Estimates of upland carbon stocks/accumulation are derived using the Canadian Forest Service CBM-CFS3 Carbon Budget Model, for productive contributing landbase area only. The 2018 values were re-calculated using the updated FMP landbase and will therefore differ from those reported in the 2018 Annual Report.</li> </ul>

- Values for emissions from forest operations are estimated based on a baseline estimate of 20,048 tonnes, weighted by total volume harvested each year.
- The large amount of emissions in 2021 is due to 21,873 ha of contributing landbase area that was burned in wildfires in this year.

<b>Indicator #C-11</b>	<b>Net carbon (C) uptake</b>	<b>Status</b>	<b>On Target</b>
<b>Target #C-11</b>	Of the net productive landbase of the Mistik FMA area, net carbon uptake shall be $\geq 0$ tonnes on an annual basis.	<b>Reporting Cycle</b>	Annual
		<b>Assessment Cycle</b>	Annual

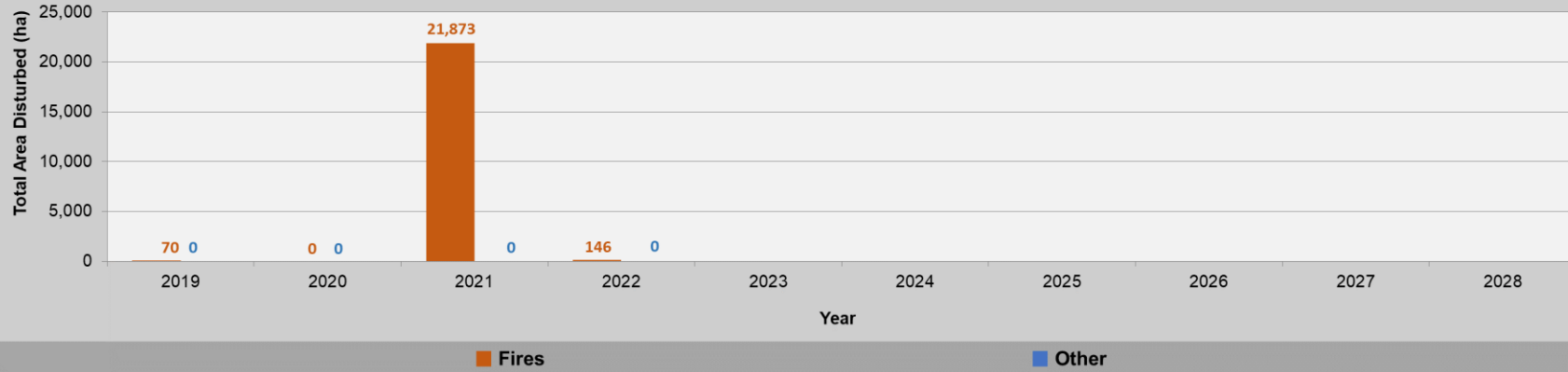
## Part 2: Wetland



Category	Year of Measurement										Current Status	Target	
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
Total Wetland Area (All Types) (ha)	890,982	890,982	890,982	890,982								890,982	N/A
% Wetland Area (All Types)	50%	50%	50%	50%								50%	N/A
Estimated wetland soil carbon (tonnes)	823,410,833	823,410,833	823,410,833	823,410,833								823,410,833	N/A

<b>Variance</b>	N/A
<b>Comments</b>	<ul style="list-style-type: none"> <li>In June 2019, Mistik Management Ltd and Ducks Unlimited Canada (DUC) renewed a Memorandum of Understanding (MOU) committing to partner on various projects to advance wetland and waterfowl stewardship. Part of this commitment includes an inventory and assessment of Mistik’s FMA and Controlled Wood Supply areas for wetland habitat and carbon storage estimates. These estimates represent the most recent estimations of wetland soil carbon on the FMA, using estimated mean soil organic carbon densities for 19 detail wetland classes.</li> <li>Note that these estimates were generated using different methodology from those in Part 1 and may not be directly comparable.</li> <li>While these estimates are not updated annually, future updates to this assessment of wetlands in Mistik’s FMA may be completed as part of this partnership, in which case the estimates above will be updated.</li> </ul> <p><sup>1</sup> Mistik Management Ltd. and Ducks Unlimited Canada. (2020). <i>Boreal Wetlands and Waterfowl: A Commitment to Stewardship Activities in Saskatchewan: Comprehensive Review</i>. Unpublished report.</p>

<b>Indicator #C-12</b>	<b>Total area of natural disturbances (fire)</b>	<b>Status</b>	<b>Not Assessed (N/A)</b>
<b>Target #C-12</b>	N/A	<b>Reporting Cycle</b>	Annual
		<b>Assessment Cycle</b>	N/A



Category	Year of Measurement										Current Status	Cumulative Average
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Fire disturbance area (ha)	70	0	21,873	146							146	5,522
Other disturbance area (ha)	0	0	0	0							0	0
<b>Total disturbance area (ha)</b>	<b>70</b>	<b>0</b>	<b>21,873</b>	<b>146</b>							<b>146</b>	<b>5,522</b>
<b>Variance</b>	N/A											
<b>Comments</b>	<ul style="list-style-type: none"> <li>Four fires occurred on the Mistik FMA in 2022.</li> <li>Fire disturbance area is based on fire boundaries provided by the Government of Saskatchewan.</li> <li>Other disturbance types may include insect disturbance, disease, blowdown, etc. These are only mapped/reported in the event that a very large and disruptive event occurs (i.e., approaching 10% of the contributing forested landbase).</li> </ul>											

## Indicator #C-13

Levels of employment

Status

Not Assessed (N/A)

## Target #C-13

N/A

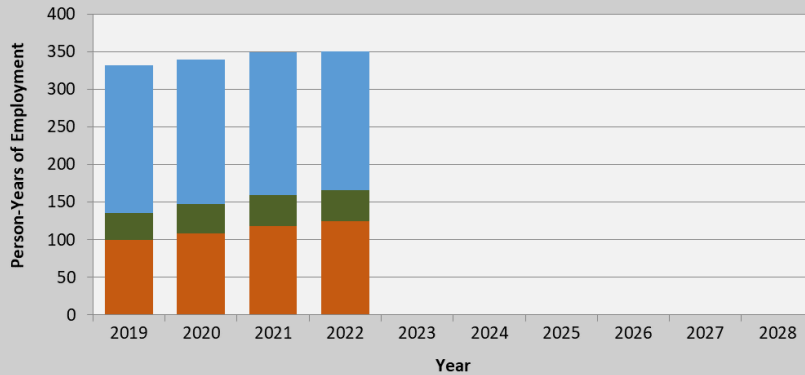
Reporting Cycle

Annual

Assessment Cycle

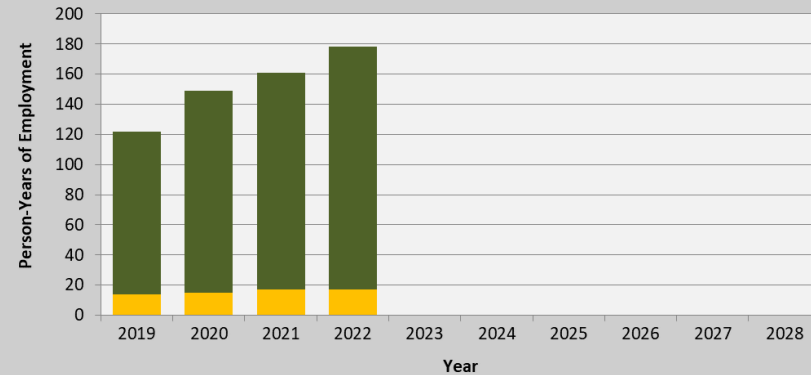
N/A

## Mill Employment



■ NorSask Forest Products 
 ■ Northwind Forest Products 
 ■ Meadow Lake Pulp

## Woodlands Operations Employment



■ Mistik (Woodlands) 
 ■ Mistik (Contractors)

Person-Years of Employment (years), by Category	Year of Measurement										Cumulative Average
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
NorSask Forest Products LP	100	108	118	125							113
Northwind Forest Products LP	36	39	41	41							39
Meadow Lake Mechanical Pulp Inc.	196	192	190	184							191
Mistik Management Ltd. (Woodlands)	14	15	17	17							16
Mistik Management Ltd. (Contractors)	108	134	144	161							137
<b>Total</b>	<b>454</b>	<b>488</b>	<b>510</b>	<b>528</b>							<b>471</b>

## Variance

N/A

## Comments

- Note that the number of person-years of employment for Mistik contractors is estimated based on the # of employees at each contractor, and the # of weeks worked by that contractor (assuming a 52-week year).
- All categories except for Meadow Lake Mechanical Pulp Inc. exhibited increased person-years of employment in the 2022 operating year.

**Indicator #C-14**

**Total person-days of work retained by persons of Indigenous descent**

**Status**

**On Target**

**Target #C-14**

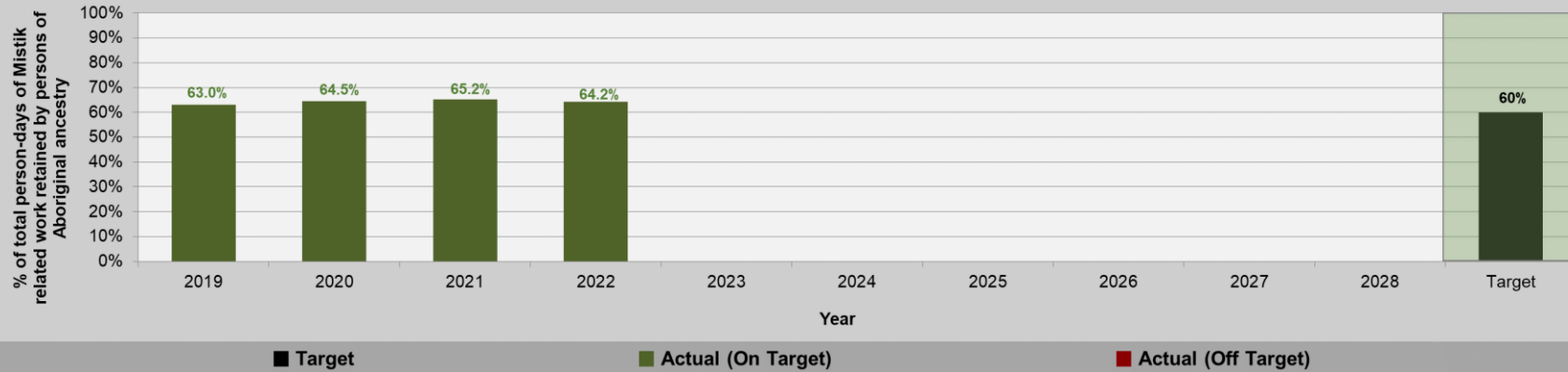
On an annual basis, achieve greater than 60% of total person-days of Mistik related work retained by persons of Indigenous ancestry.

**Reporting Cycle**

**Annual**

**Assessment Cycle**

**Annual**



Category	Year of Measurement										Current Status	Target
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
% of Mistik's total person-days of work retained by persons of Indigenous ancestry	63.0%	64.5%	65.2%	64.2%							64.2%	60%

**Variance**  
No acceptable variance.

**Comments**

- Data is based on employment data from NorSask Forest Products LP, NorthWind Forest Products LP, Mistik Management Ltd., and all woodlands contractors hired by Mistik Management Ltd. Data from Meadow Lake Mechanical Pulp Inc. is not available.
- The number of person-years of employment for Mistik contractors is estimated based on the # of employees and indigenous employees at each contractor, and the # of weeks worked by that contractor (assuming a 52-week year).