

KENOGAMI FOREST



SFMM results

April 7, 2010

What did we have to do

- VERY simply put:
 - Take forest information and objectives, put into the SFMM model, get a result
 - SFMM is a tool for long-term strategic forest management planning and objective achievement decision making as it relates to forest cover
 - SFMM projects future forest condition, wildlife habitat, wood supply and suggests levels of harvest and renewal to achieve the desired future forest
 - SFMM doesn't project road locations, impacts on tourism, hunting etc...)
 - Planning team determines how the results fit and/or balance with the objectives
 - Planning team figures out what changes are needed for a better balanced result

This happened over and over and over and over again.....

Challenges



- A few challenges along the way
 - Caribou Conservation Plan and Recovery strategy
 - New lines were drawn with respect to caribou population zones (and subsequent mosaic lines)
 - Forest update
 - No harvest in last fiscal year so we updated the data
 - MNR direction changing/new and are trying to incorporate the best science

Result was a delay in development of a Management Strategy (and a few grey hairs)

On the Positive Side...

(yes there is a positive side)

- Landbase more accurate for planning purposes
- Better science to follow
 - Although not required to follow the pending Landscape guide, we are more Landscape guide 'friendly'



Balancing Act

A stylized illustration of a balance scale, symbolizing the balancing act between different factors. The scale is positioned on the right side of the slide, with its beam extending towards the left. The background is a solid dark brown color.

- Selected habitat wildlife species
 - Including caribou and marten
- Future forest conditions
 - e.g. old growth
- Wood Flow
 - Between terms, upland/lowland

Just to name a few

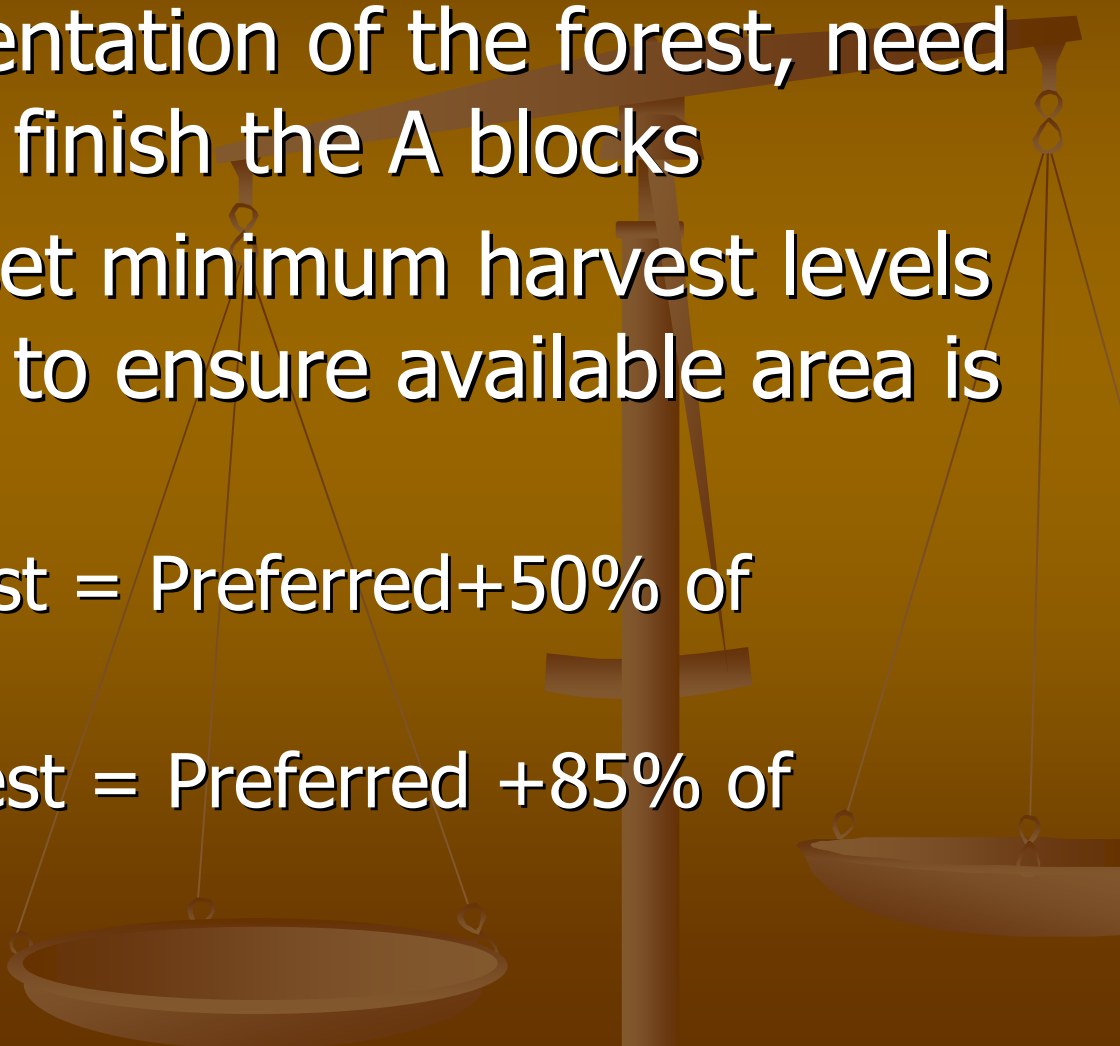
(also includes those things we can model for from the Desired Forest and Benefit exercise regarding forest cover manipulation)

Requirements



- Have targets to meet – most wildlife habitat/forest composition/conditions have predetermined BNV's
 - The bounds of natural variation=how the forest grows without human intervention
 - Planning team decided to maintain or exceed minimum levels
 - Lower bound of these levels established as a minimum to maintain long-term

Requirements - Caribou

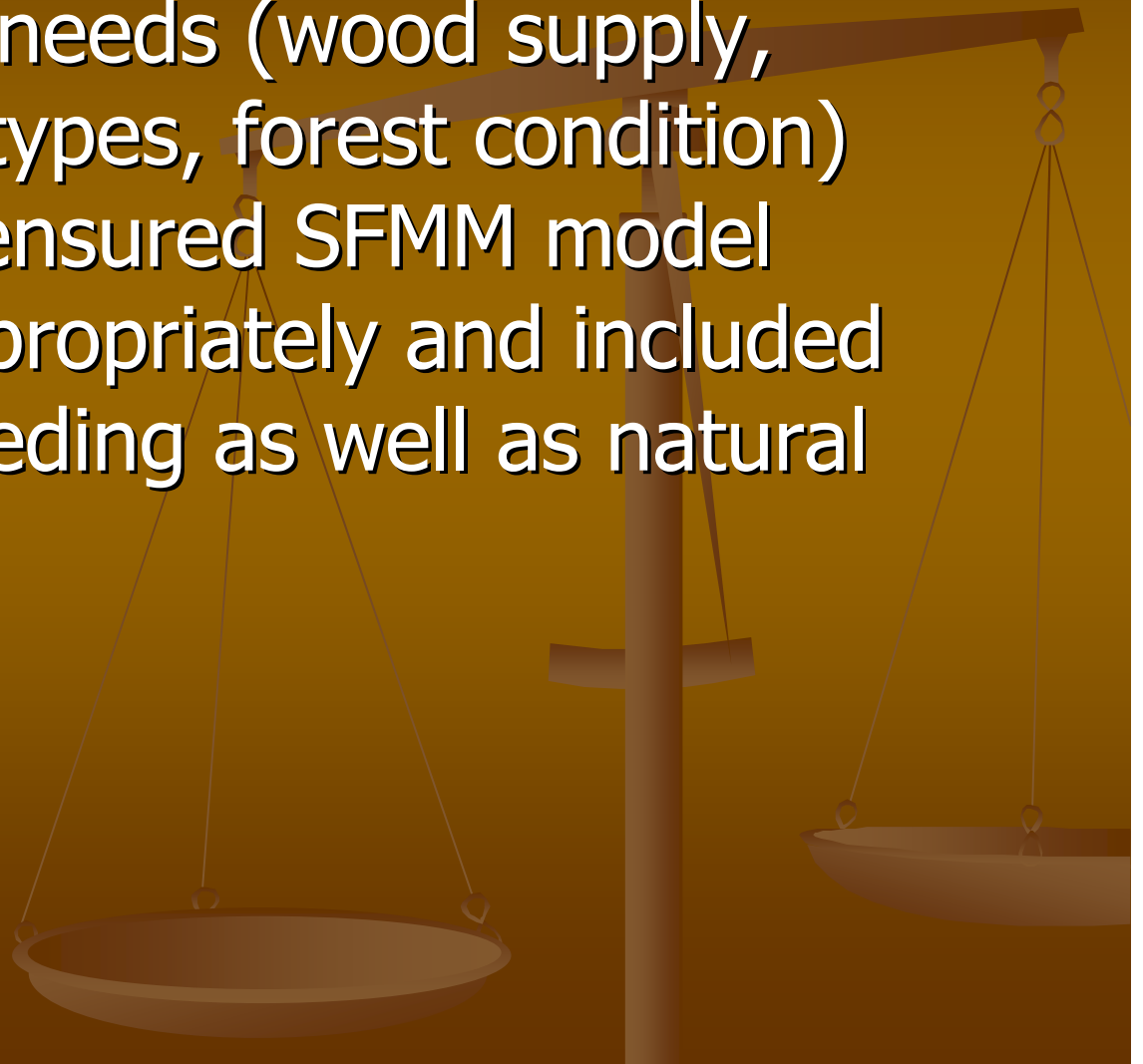
- Minimize fragmentation of the forest, need to clean-up and finish the A blocks
 - Planning team set minimum harvest levels for the A blocks to ensure available area is harvested
 - Minimum harvest = Preferred + 50% of optional
 - Maximum harvest = Preferred + 85% of optional
- 



- Preferred is dark green, optional light green

Requirements - Renewal

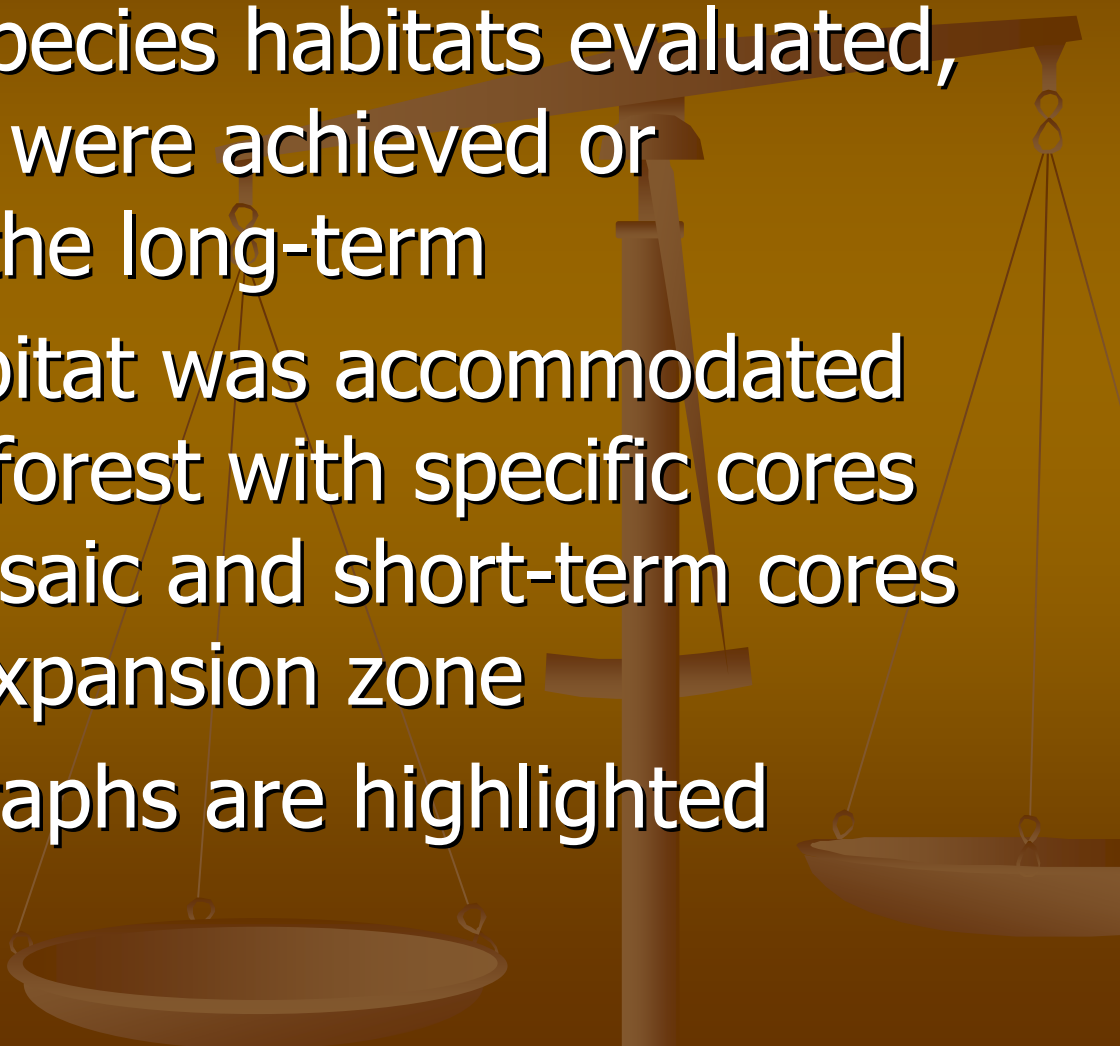
- To meet future needs (wood supply, wildlife habitat types, forest condition) planning team ensured SFMM model regenerated appropriately and included planting and seeding as well as natural regeneration



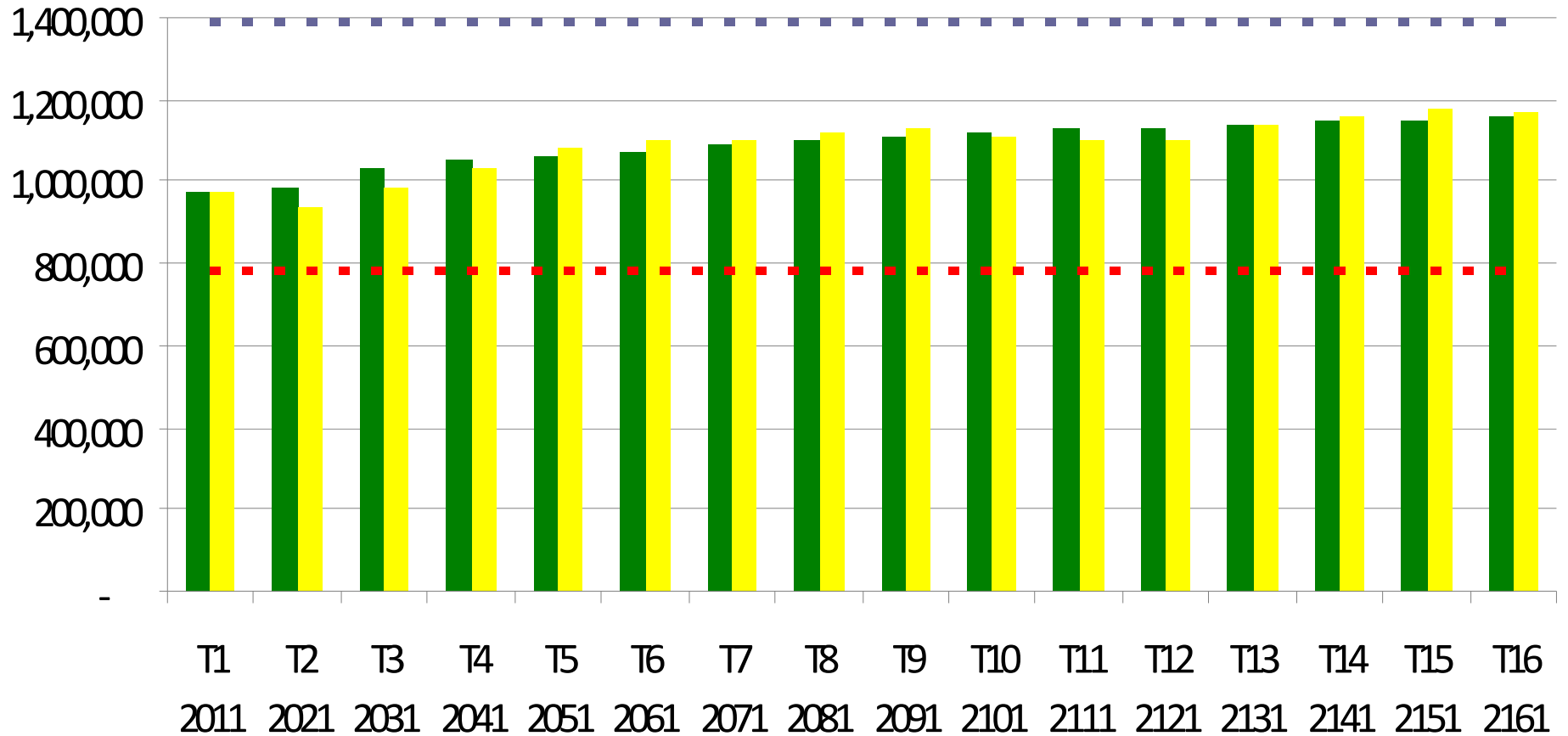
Outcomes



Overall Wildlife

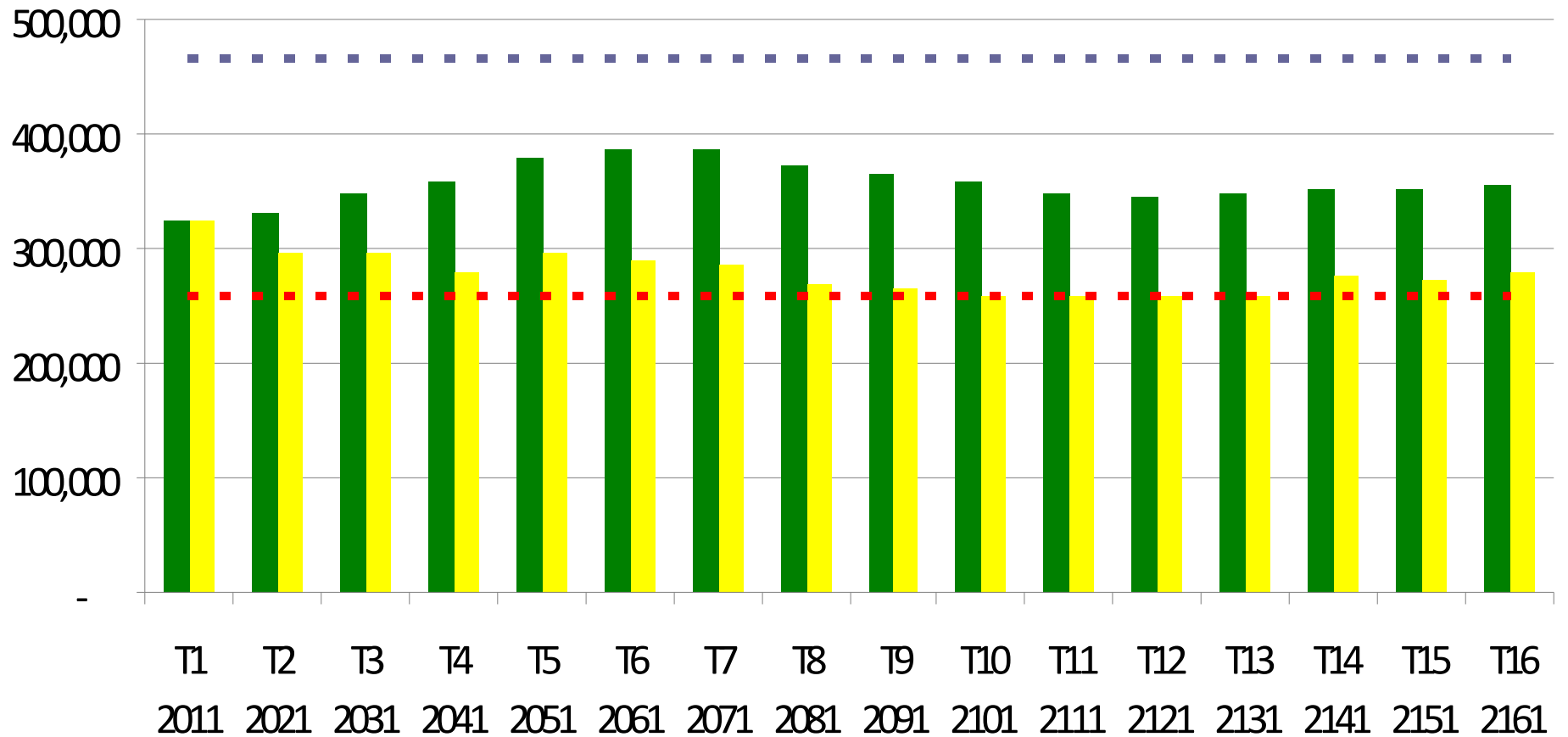
- For all wildlife species habitats evaluated, minimum levels were achieved or exceeded over the long-term
 - Marten core habitat was accommodated over the whole forest with specific cores south of the mosaic and short-term cores in the caribou expansion zone
 - Some wildlife graphs are highlighted
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Caribou Refuge Preferred Habitat Area (ha) (SFMV Matrix) Relative to the Bounds of Natural Variation



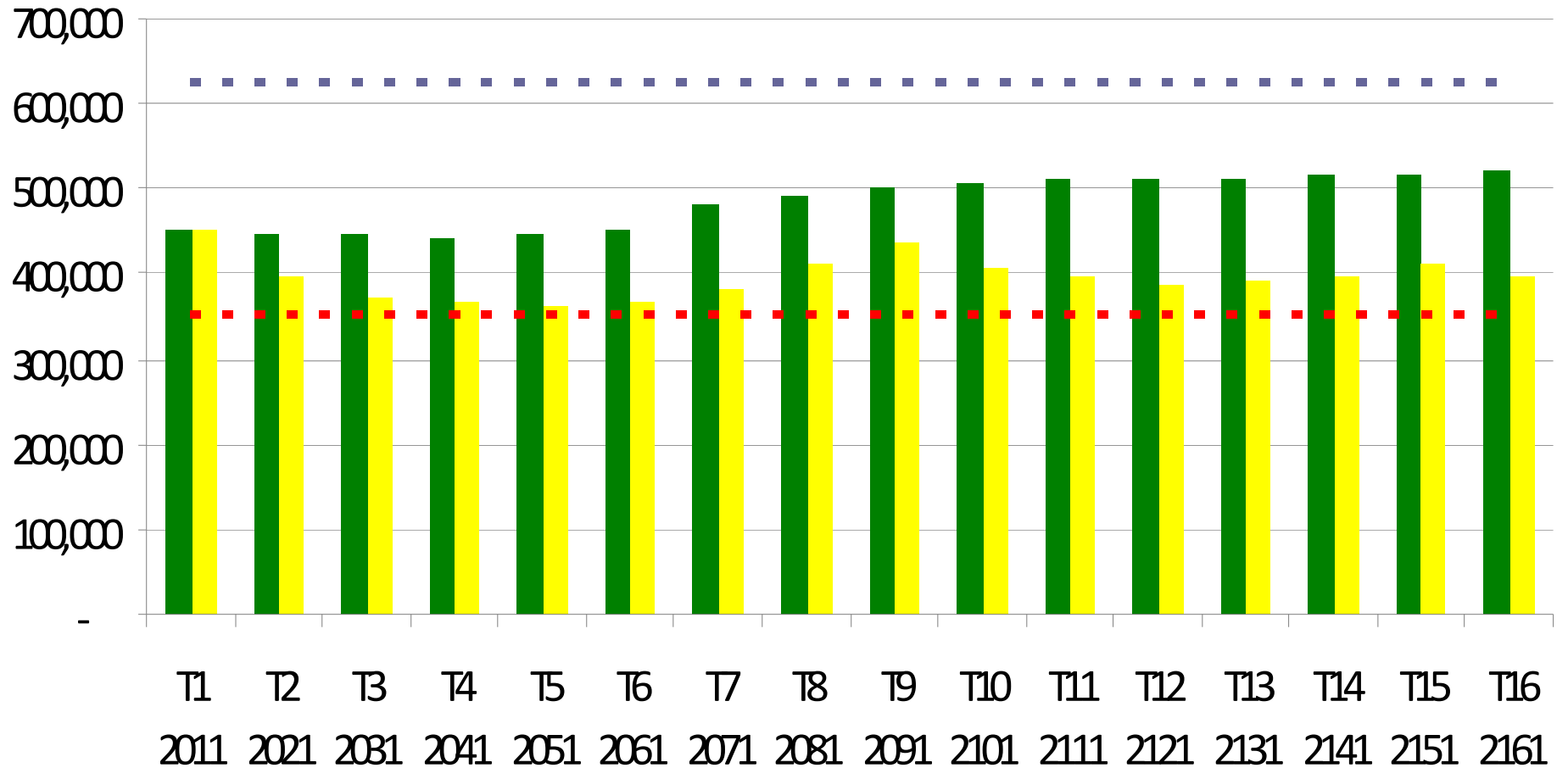
- CARI Natural Benchmark
- CARI Management Strategy
- CARI Lower BNV
- CARI Upper BNV

Caribou Winter Preferred Habitat Area (ha) (SFMM Matrix) Relative to the Bounds of Natural Variation



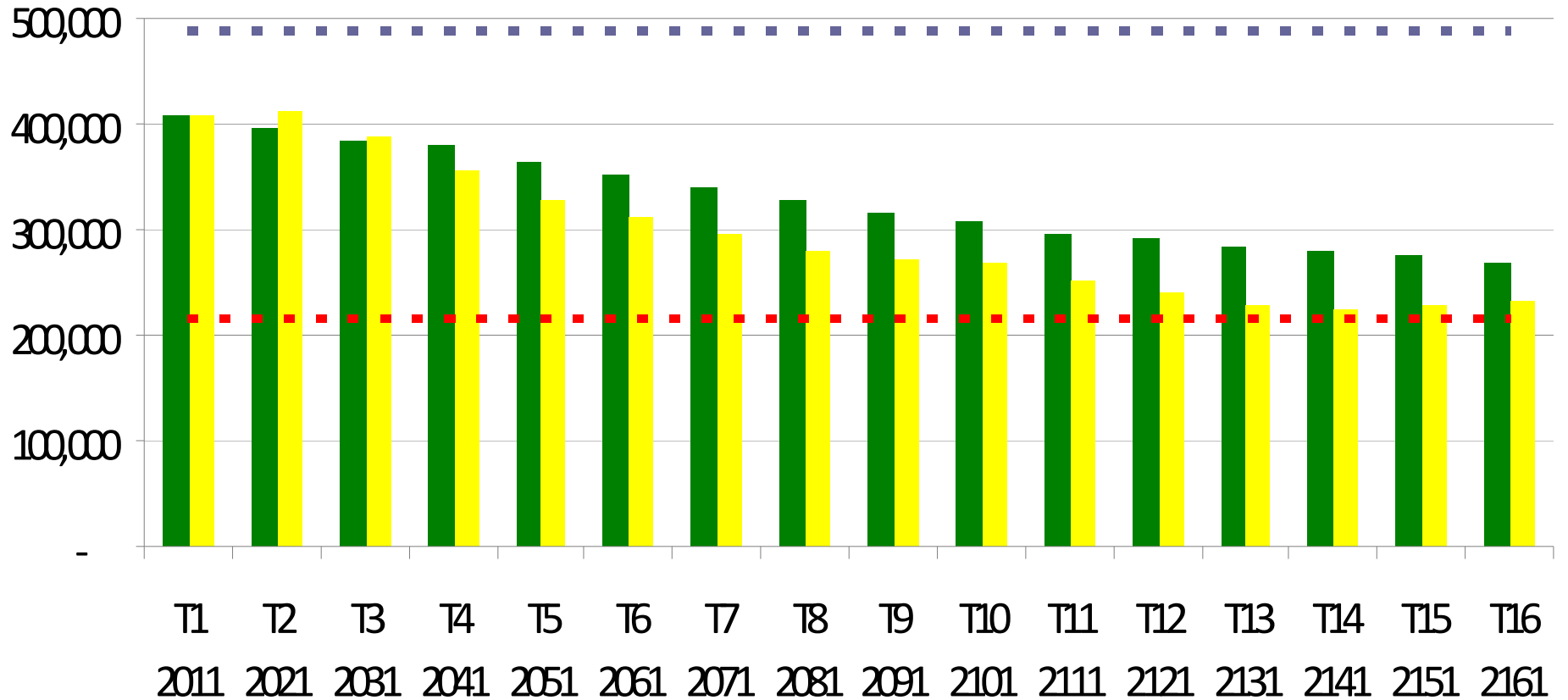
- CARI w Natural Benchmark
- CARI w Management Strategy
- CARI w Lower BNV
- CARI w Upper BNV

Marten Preferred Habitat Area (ha) Relative to the Bounds of Natural Variation

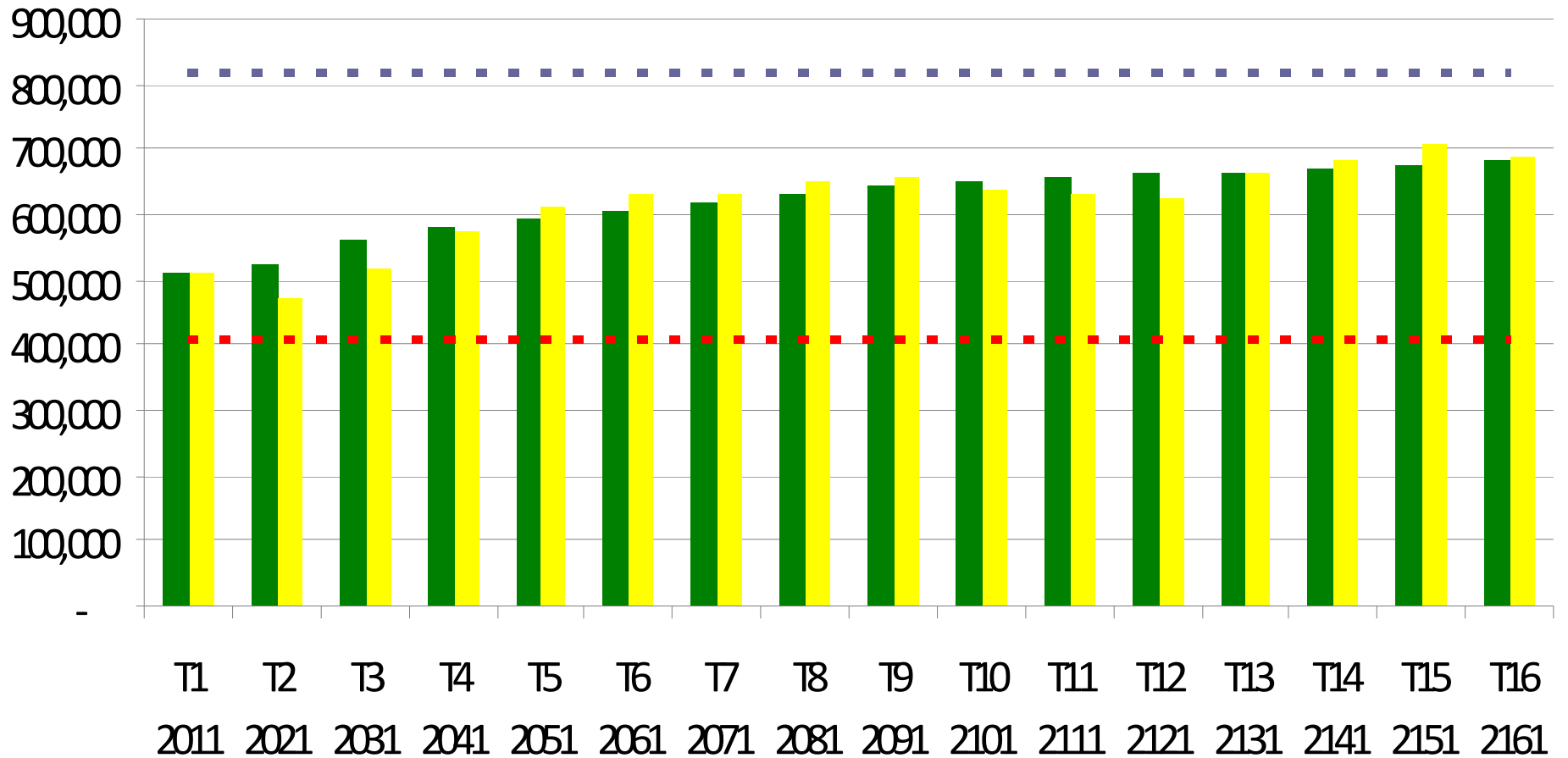


- MART Natural Benchmark
- MART Management Strategy
- MART Lower BNV
- MART Upper BNV

Moose Browse Preferred Habitat Area (ha) Relative to the Bounds of Natural Variation

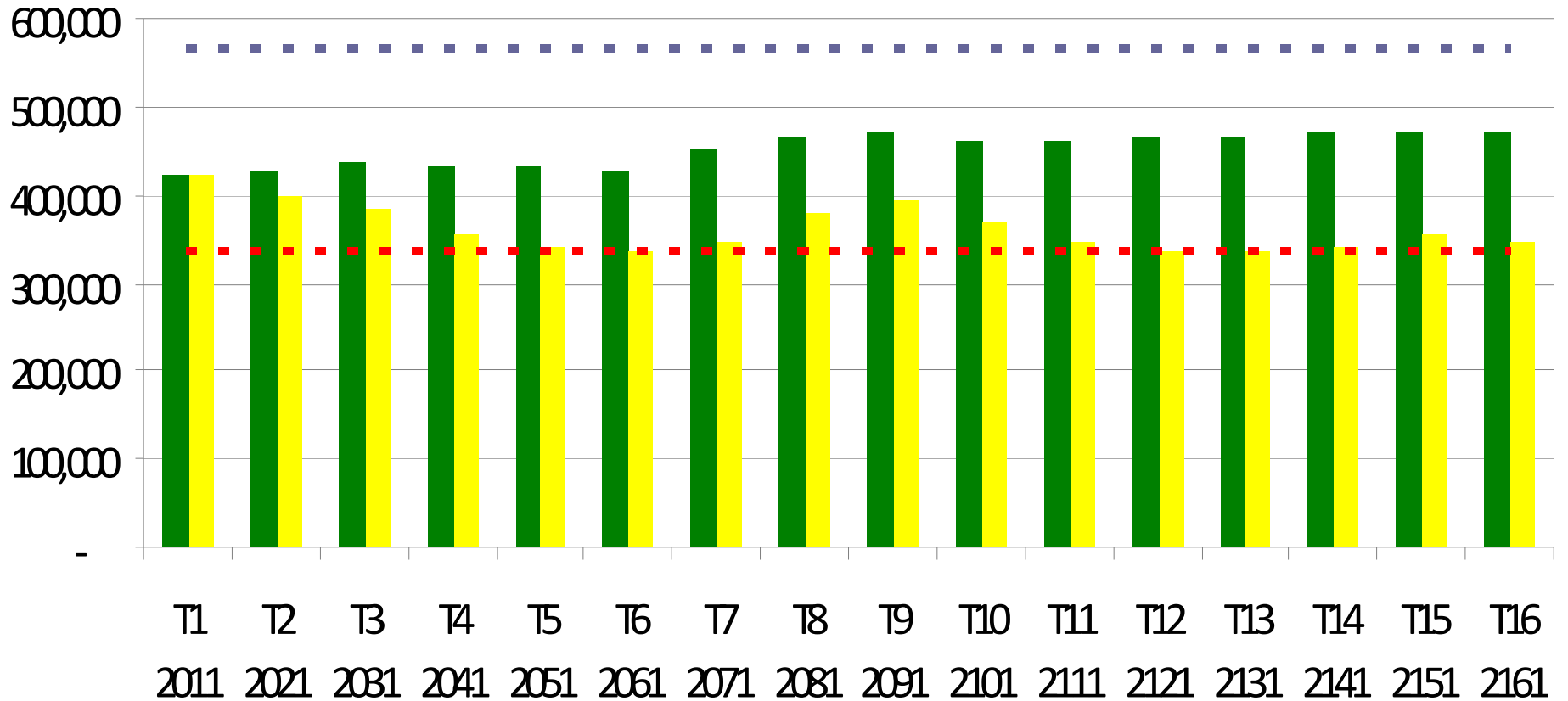


Moose Winter Preferred Habitat Area (ha) Relative to the Bounds of Natural Variation



- MDCSwNatural Benchmark
- MDCSwManagement Strategy
- MDCSwLower BNV
- MDCSwUpper BNV

Black Bear Foraging Preferred Habitat Area (ha) Relative to the Bounds of Natural Variation



- BLBEf Natural Benchmark
- BLBEf Management Strategy
- BLBEf Lower BNV
- RIDEF Lower BNV

Overall - Harvest

- Annual total harvest area over time on average after T1 we are 10,000 ha per year steady
- Annual total harvest volume after T1 900,000 m³/yr
 - Term 1 higher due to clean up in Caribou A mosaic blocks.

Results – Harvest Area

- Efforts made to ensure all forest units had a representative harvest level
 - No excessive amount of lowland winter in any given 10 yr term (20-30%)
- To harvest caribou mosaic on schedule, AHA 50% higher than strategic long-term level (15,000 ha/yr vs 10,000 ha/yr after 2021)
 - Comparison – 2005 FMP 14,000 ha/yr fluctuating between 12,000 and 13,000 ha/yr

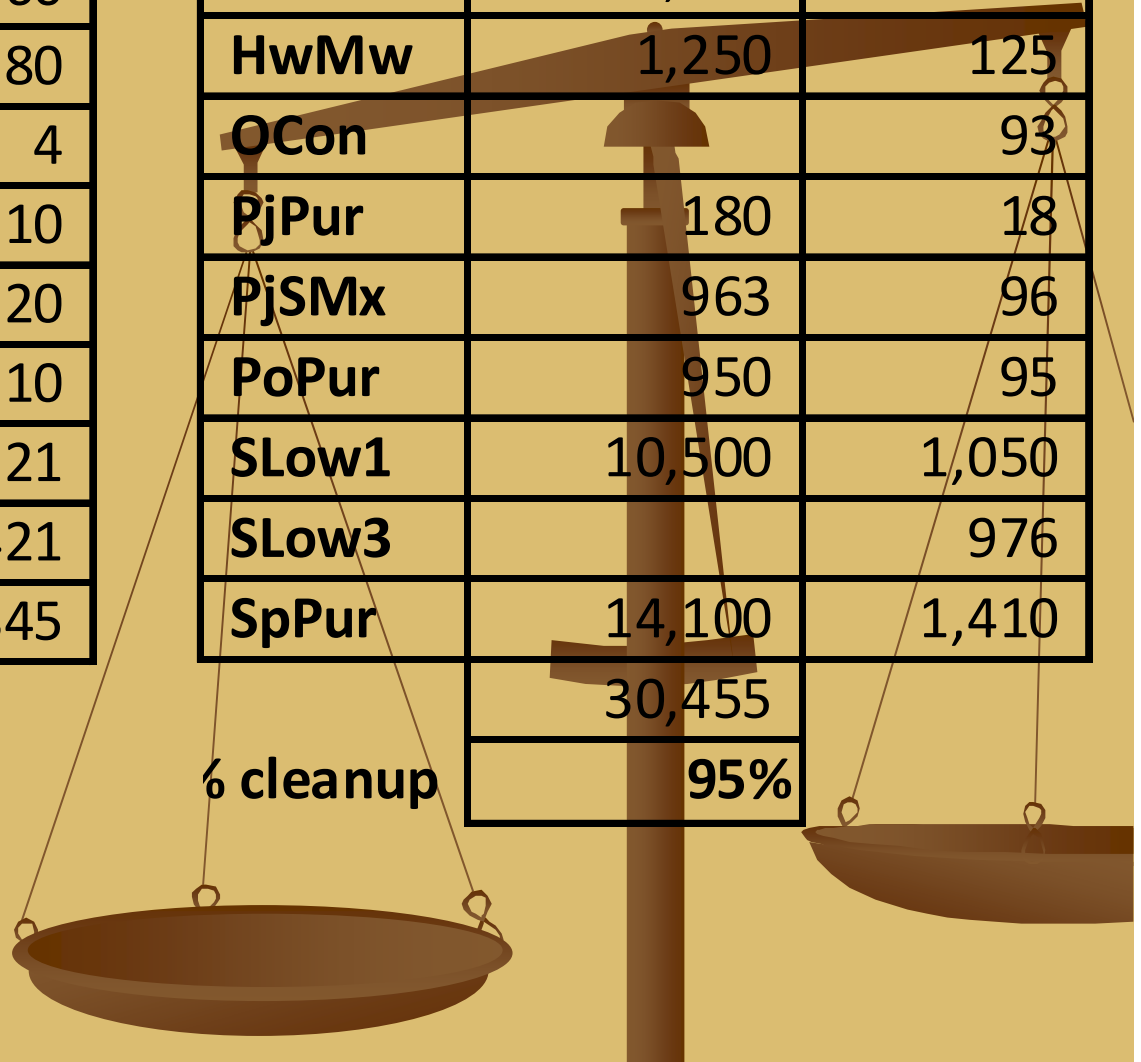
Results - Volume

- SPF 1,000,000 m³/yr for 10 yrs then drops to 750,000 m³/yr for following 50 then increases again after (part of dip in T2-4 due to 20,000 ha of deferred mosaic block for caribou use)
 - 2005 FMP was 1,300,000 m³/yr fluctuation from 1,000,000 and 1,300,000 m³/yr
- PO 200,000 m³/yr for 10 yrs, drops to 150,000 m³ for 100 yrs
 - 2005 FMP 282,000 m³/yr fluctuating between 160,000 and 282,000 m³/yr for 100 yrs

ManStrat Harvest

A1	10 yr	annual
BwPur	69	7
CoMx	4,600	460
HwMw	1,800	180
OCon		4
PjPur	1,100	110
PjSMx	3,204	320
PoPur	2,100	210
SLow1	3,212	321
SLow3		421
SpPur	8,450	845
	24,534	
% cleanup	93%	

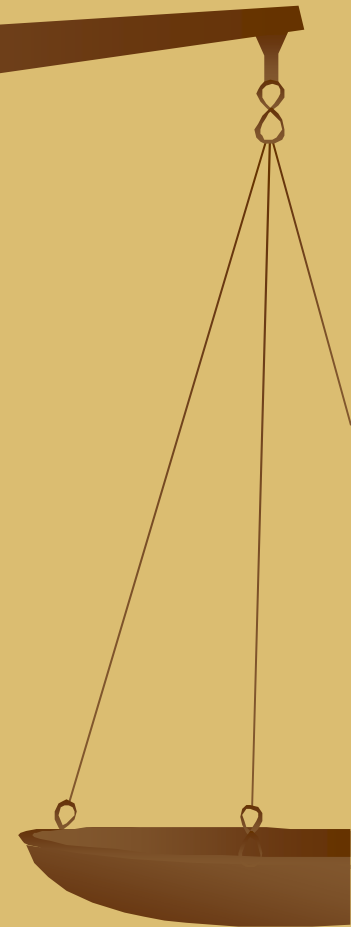
A2	10 yr	annual
BwPur	13	1
CoMx	2,500	250
HwMw	1,250	125
OCon		93
PjPur	180	18
PjSMx	963	96
PoPur	950	95
SLow1	10,500	1,050
SLow3		976
SpPur	14,100	1,410
	30,455	
% cleanup	95%	



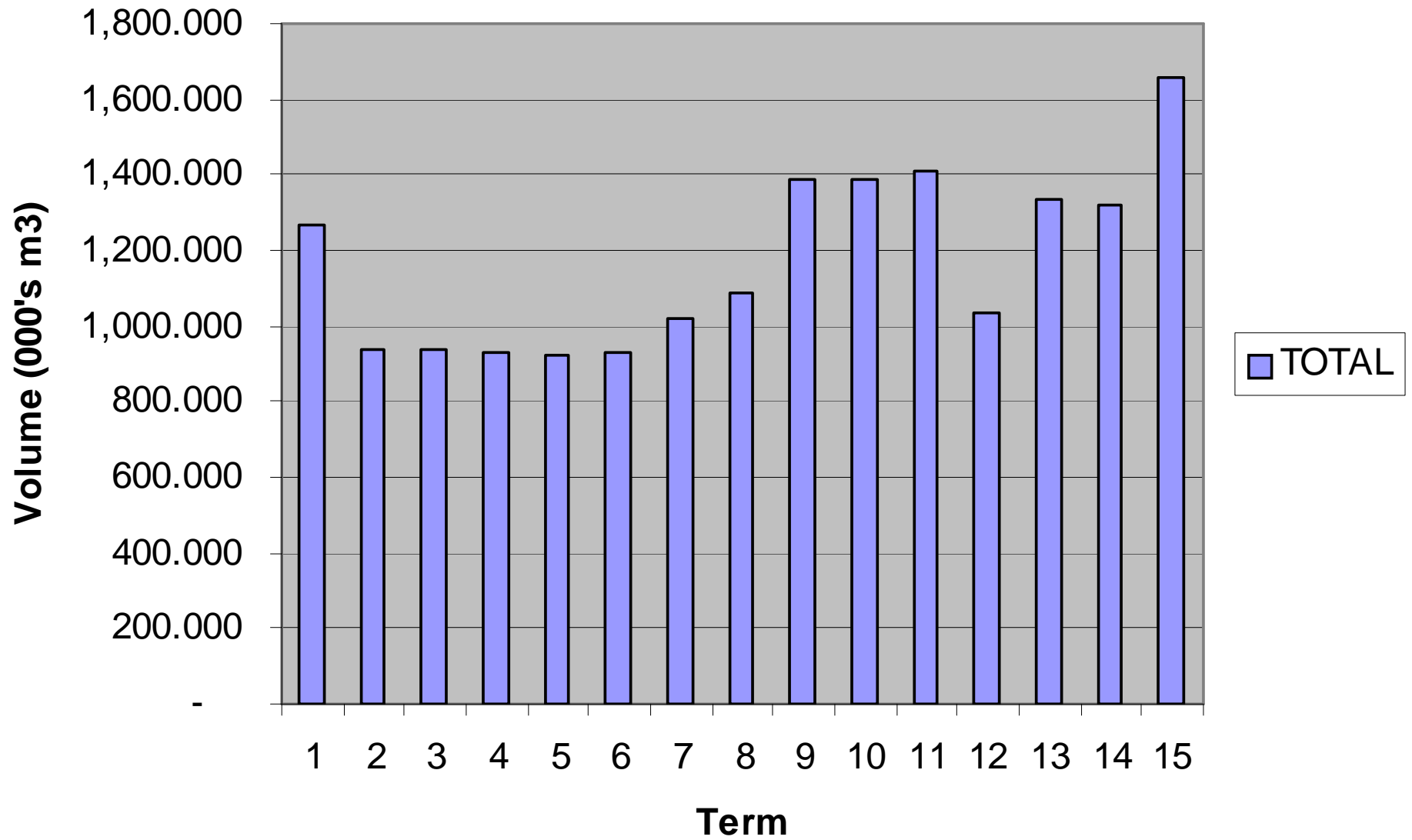
Annual Total Volume (000's m3)

TOTAL

	SPF	Po	Bw	Oc	TOTAL
T1	1,015.000	204.627	14.000	33.624	1,267.252
T2	743.057	164.475	13.650	19.618	940.800
T3	745.973	153.050	14.388	24.288	937.699
T4	750.000	148.110	15.266	19.332	932.707
T5	750.000	139.334	19.472	13.028	921.835
T6	775.000	124.579	16.470	13.000	929.049
T7	815.000	176.997	19.980	11.621	1,023.598
T8	890.000	166.776	22.414	8.529	1,087.719
T9	1,200.000	155.828	18.669	11.549	1,386.046
T10	1,200.000	158.159	18.841	14.186	1,391.186
T11	1,200.000	178.660	15.788	16.200	1,410.648
T12	905.730	111.645	12.717	7.290	1,037.382
T13	1,174.360	136.851	14.500	11.493	1,337.205
T14	1,176.197	121.620	13.213	6.607	1,317.638
T15	1,500.000	120.673	16.541	21.835	1,659.049



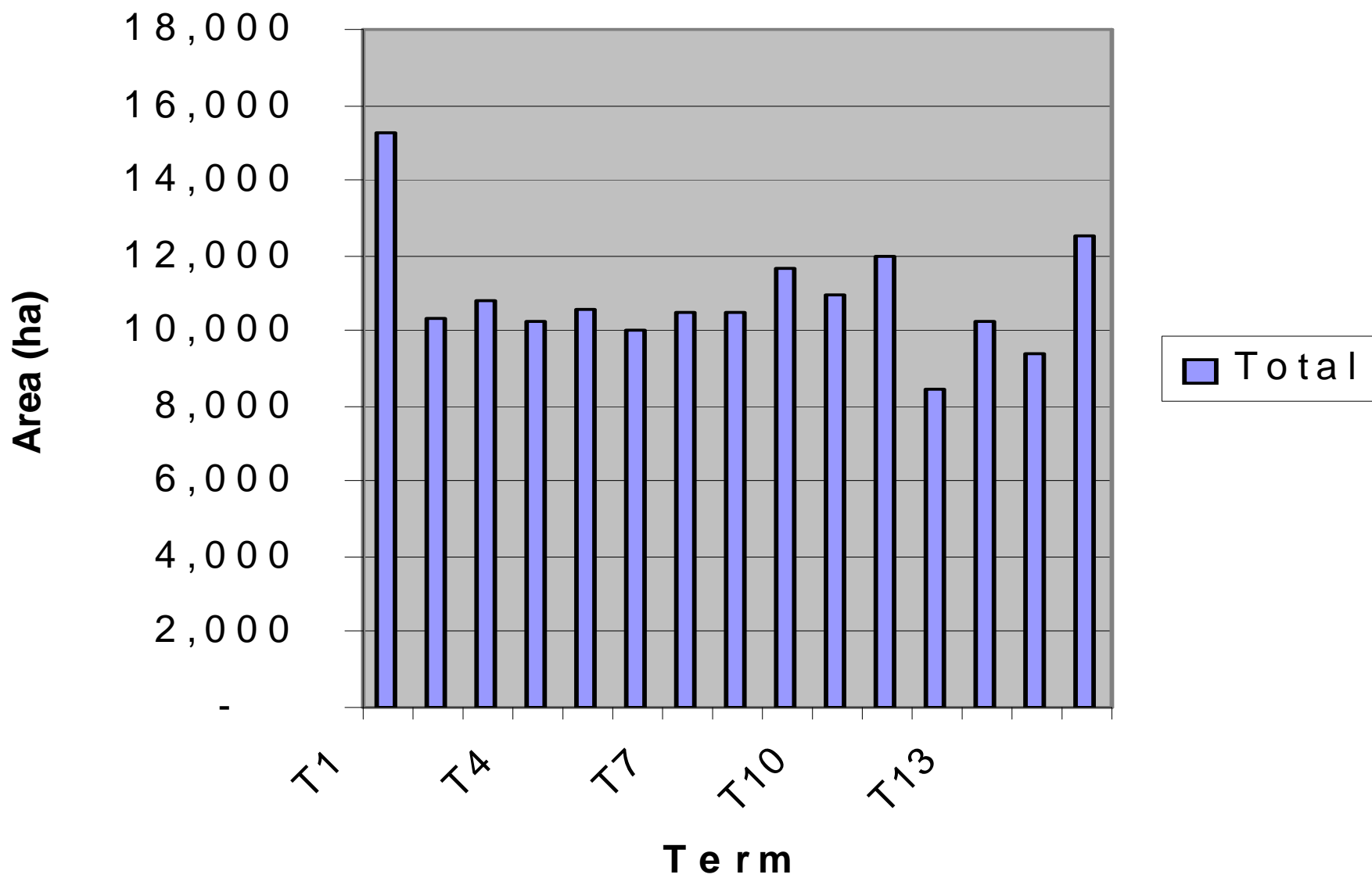
Total Annual Volume



Annual Total Harvest Area

	Total	Forest Unit:										Lowland	Lowland
		BwPur	CoMx	HwMw	OCon	PjPur	PjSMx	PoPur	SLOW1	SLOW3	SpPur	Harvest	Prop
T1	15,277	72	2,339	1,365	127	491	1,096	1,343	1,975	2,711	3,758	4,812	32%
T2	10,352	65	2,092	919	110	274	1,116	993	1,201	924	2,659	2,235	22%
T3	10,814	95	579	1,972	200	510	570	758	1,044	2,300	2,787	3,543	33%
T4	10,285	78	2,026	1,287	200	475	736	652	797	1,167	2,866	2,164	21%
T5	10,549	68	1,992	1,988	193	1,058	616	259	363	1,975	2,038	2,530	24%
T6	9,993	220	2,214	282	162	333	265	642	240	1,351	4,283	1,753	18%
T7	10,457	155	945	1,739	200	1,190	841	780	240	1,429	2,937	1,869	18%
T8	10,456	181	3,555	686	127	1,278	515	572	254	1,118	2,169	1,499	14%
T9	11,622	118	1,094	523	110	953	767	621	240	284	6,913	634	5%
T10	10,987	82	1,318	465	110	815	938	557	1,187	120	5,395	1,417	13%
T11	11,952	50	982	749	110	1,765	607	1,009	1,068	120	5,493	1,298	11%
T12	8,460	50	694	294	110	580	1,253	407	240	950	3,882	1,300	15%
T13	10,226	50	646	303	110	1,459	447	642	742	897	4,930	1,749	17%
T14	9,425	50	894	196	110	2,699	1,086	443	240	957	2,750	1,307	14%
T15	12,549	50	476	75	110	1,583	1,053	330	1,460	1,968	5,444	3,538	28%

Total Annual Area



Overall - Renewal



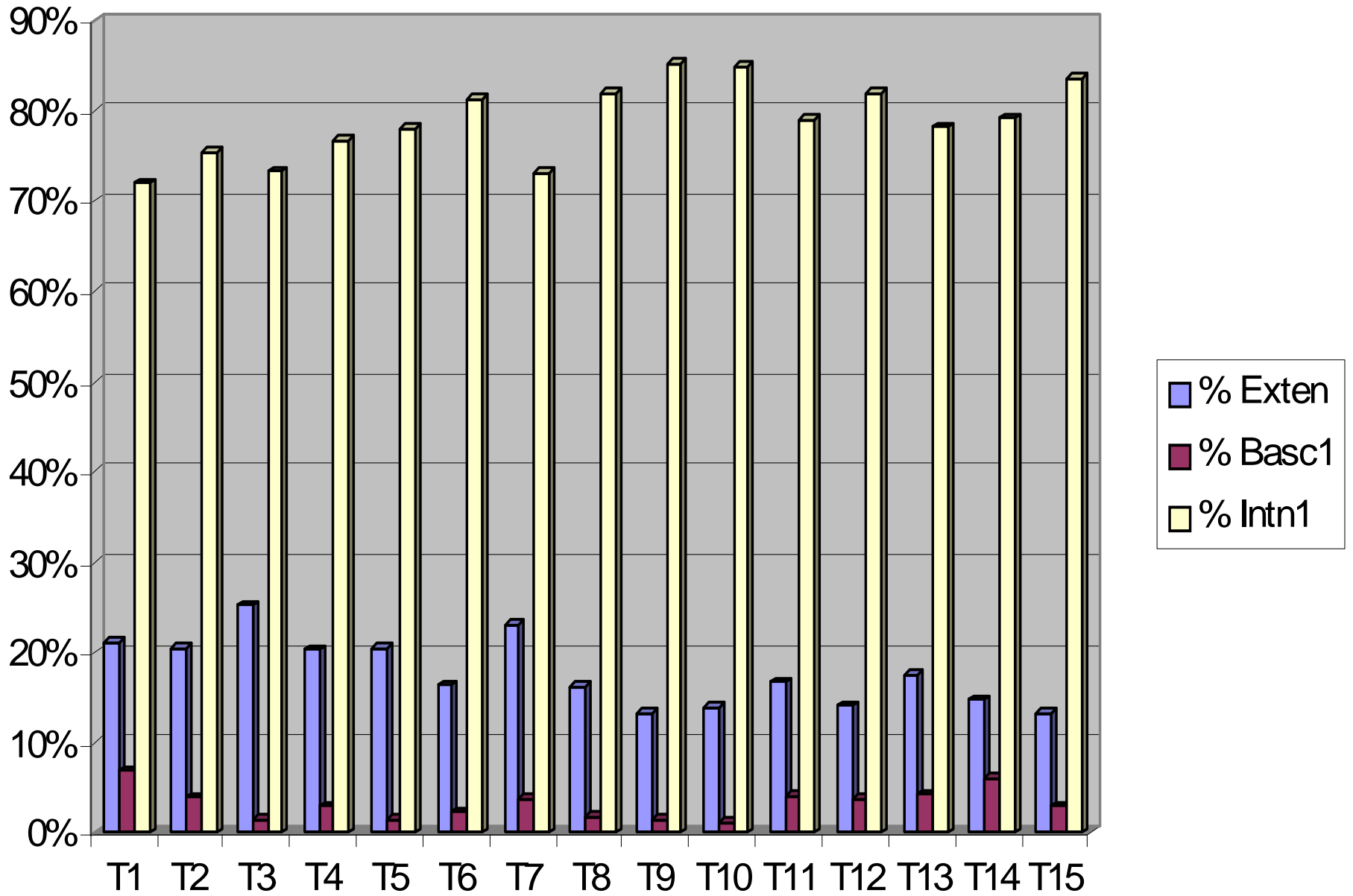
- On average
 - 75% over 50 years are regenerated by planting
 - 22% by natural regen
 - 4% by seeding
- To meet long-term forest cover, wildlife habitat and wood supply objectives, SFMM suggested 80-85% of harvest areas use planting or seeding as regen over next 100 years (78%/19%)

Annual Area Renewed by Intensity

	Total	Exten	Basc1	Intn1
T1	14,971	3,173	1,027	10,771
T2	10,145	2,083	408	7,654
T3	10,597	2,665	162	7,770
T4	10,079	2,044	309	7,726
T5	10,338	2,119	159	8,060
T6	9,860	1,611	228	8,022
T7	10,343	2,388	388	7,567
T8	10,409	1,689	185	8,535
T9	11,571	1,533	180	9,857
T10	10,987	1,533	134	9,320
T11	11,952	2,007	494	9,450
T12	8,460	1,199	324	6,937
T13	10,226	1,790	447	7,989
T14	9,425	1,385	573	7,467
T15	12,549	1,677	382	10,491

Proportion Renewed by Intensity

% Exten	% Basc1	% Intn1
21%	7%	72%
21%	4%	75%
25%	2%	73%
20%	3%	77%
20%	2%	78%
16%	2%	81%
23%	4%	73%
16%	2%	82%
13%	2%	85%
14%	1%	85%
17%	4%	79%
14%	4%	82%
18%	4%	78%
15%	6%	79%
13%	3%	84%



Summary

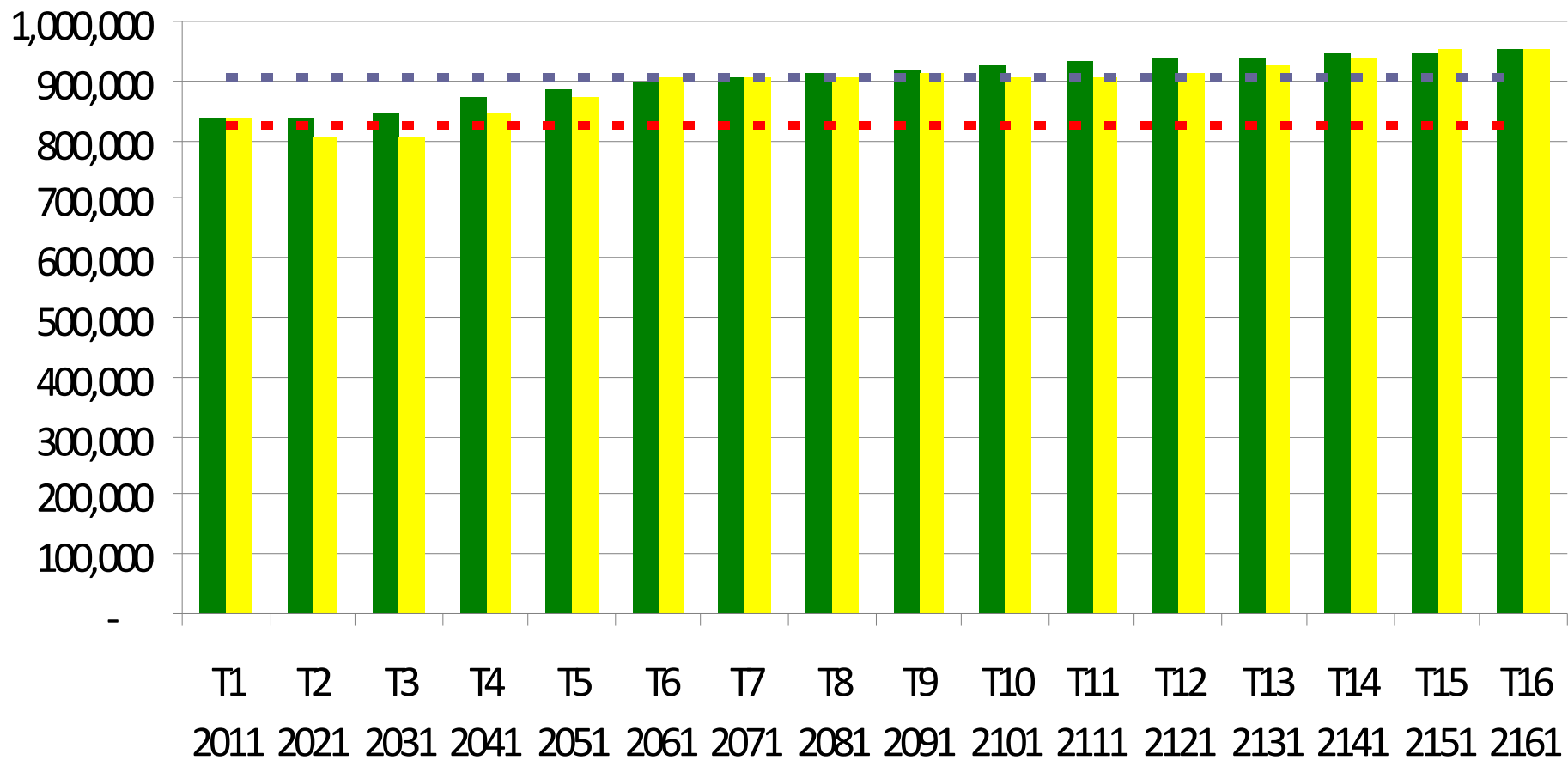
- Annual volume (T1 only) 1,267,252 m³
- Wildlife habitat and old growth targets met
- Caribou A blocks completed



Caribou

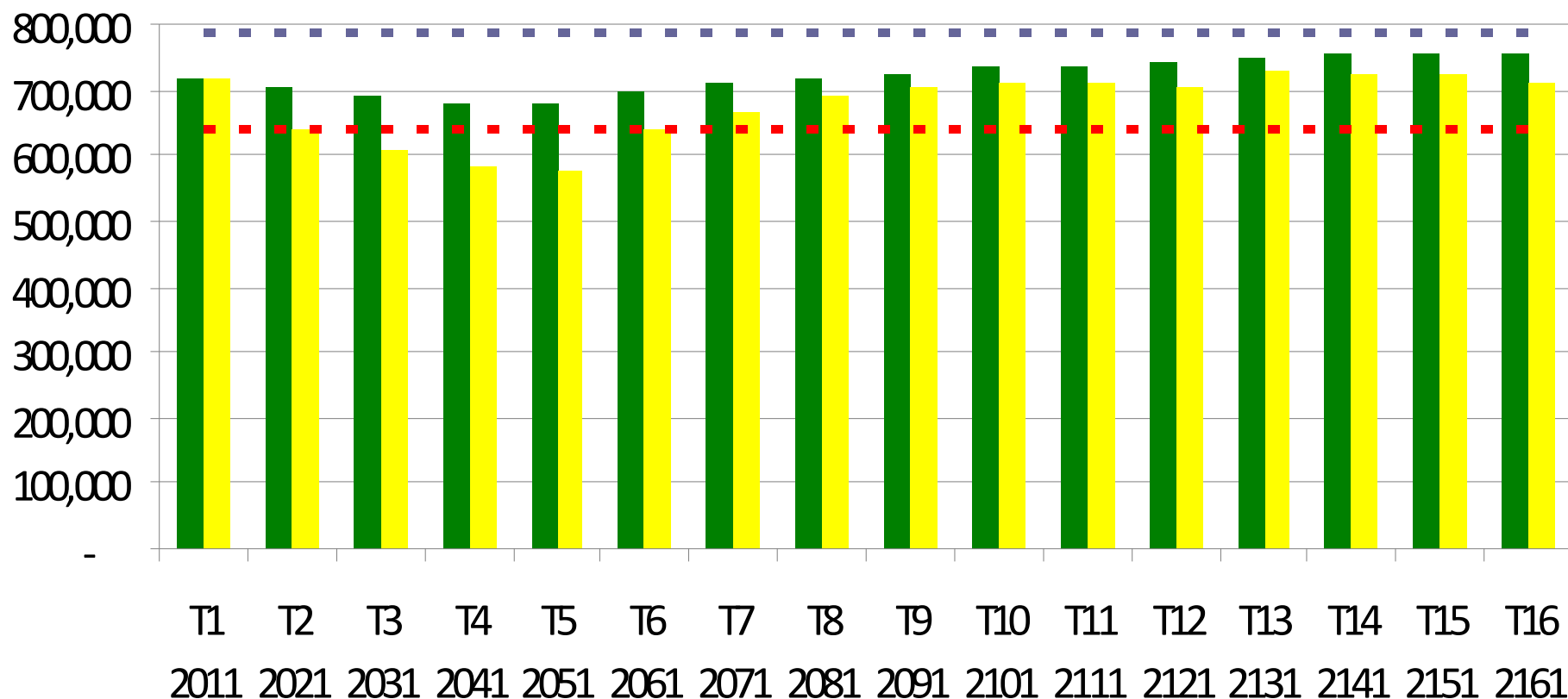
- Planning team tried to maintain minimum desired area caribou refuge and habitat as suggested by MNR Landscape Guide science (we don't have to follow it as it is for 2012 teams – we are 2011)
- Refuge projected to drop slightly below desired level between 2021-2031
- Habitat projected to drop between 2031-2061
- Have to do this to create caribou habitat (minimizing fragmentation of forest cover and create even-aged patches over time)

Caribou Refuge Habitat Area (ha) Relative to the Simulated Range of Natural Variation



- Cr Natural Benchmark
- Cr Management Strategy
- Cr SRNM Lower Bound
- Cr SPNM Upper Bound

Caribou Winter Habitat Area (ha) (Used + Preferred) Relative to the Simulated Range of Natural Variation



- Gwt Natural Benchmark
- Gwt Management Strategy
- Gwt SRM/L Lower Bound
- Gwt SRM/L Upper Bound

Next Steps

- If there are no concerns expressed by the LCC or planning team members, planning team will:
 - Proceed with LTMD development
 - Complete harvest planning
 - Complete proposed primary road planning
 - Preliminary determination of sustainability
 - Continue consultation with First Nation and Tourism stakeholders
 - Complete and present the Proposed LTMD to the LCC
 - Propose the LTMD for public review and endorsement by MNR Regional Director

Questions?

