

2022 – 2032
Forest Management Plan
for the
Kenora Forest



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FINAL PLAN

Title, Certification and Approval Page

Forest Management Plan
for the
Kenora Forest
(Sustainable Forest Licence #550400, Management Unit #644)

Kenora District, Northwest Region, Ontario Ministry of Northern Development and Mines, Natural Resources and Forestry,
Miisun Integrated Resource Management Company on behalf of Miitigoog LP
for the 10-year period from April 1, 2022 to March 31, 2032.

I hereby certify that I have prepared this forest management plan, including the Silvicultural Ground Rules, to the best of my professional skill and judgement with the assistance of an interdisciplinary planning team in accordance with the requirements of the *Forest Management Planning Manual* and the *Forest Information Manual*.

<Original signed versions of this page are retained at the offices of the Kenora District NDMNRF and Miisun.>

R.P.F. seal Kurtis Pochailo, R.P.F., Plan Author,
Miisun Integrated Resource Management Company Date: _____

Submitted by: _____ Date: _____
Chief Lorraine Cobiness, President, Miitigoog LP

Erik Holmstrom, R.P.F., Vice-President, Miitigoog LP Date: _____

I recommend that this forest management plan be approved for implementation and certify that it has been prepared in accordance with the requirements of the *Forest Management Planning Manual*, the *Forest Information Manual*, and relevant policies and obligations (including any relevant NDMNRF agreements with Indigenous peoples). I also certify that the forest management plan has been prepared using the applicable forest management guides. In this forest management plan, prescriptions and conditions that differ from specific direction or recommendations in the applicable forest management guides are identified in the attached List of Exceptions.

Certified and Recommended for Approval By:

Brian Kilgour, District Manager, Kenora District, NDMNRF Date: _____

Kevin Ride, Forest Initiatives Lead/Regional Resources Manager, Northwest Region, NDMNRF Date: _____

Approved by:

Michael Gluck, Regional Director, Northwest Region, NDMNRF Date: _____



Plan Components Not Prepared By the Plan Author

Forest Management Plan
for the
Kenora Forest

Kenora District, Northwest Region, Ontario Ministry of Northern Development and Mines,
Natural Resources and Forestry,
Miisun Integrated Resource Management Company on behalf of Miitigoog LP
for the 10-year period from April 1, 2022 to March 31, 2032.

I hereby certify that I have prepared the sections of the forest management plan as indicated, to the best of my professional skill and judgement, in accordance with the requirements of the *Forest Management Planning Manual*.

Sections Prepared:

Supplementary Documentation B – Analysis Package, Appendices 1 (Caribou), 2 (Moose), 3 (Deer) and 4 (Elk).

Supplementary Documentation I – Area of Concern Planning, AOC N15 Whip-Poor-Will (associated prescription and conditions in Table FMP-11)

Name: Peter Hettinga
Job Title: Management Biologist

Signature

Date

<Original signed versions of this page are retained at the offices of the Kenora District NDMNRF and Miisun>



1 **Forest Management Plan - List of Exceptions**

2
3 Forest Management Plan
4 for the
5 **Kenora Forest**

6
7 Kenora District, Northwest Region, Ontario Ministry of Northern Development and Mines,
8 Natural Resources and Forestry,
9 Miisun Integrated Resource Management Company on behalf of Miitigoog LP
10 for the 10-year period from April 1, 2022 to March 31, 2032.

11
12
13
14 All silvicultural treatments in the silvicultural ground rules (Table FMP-4) that are
15 exceptions to the recommendations in the silvicultural guides, and all operational
16 prescriptions and conditions for areas of concern that are exceptions to the specific
17 direction or recommendations (standards and guidelines) in the applicable forest
18 management guides, are provided in this list of exceptions. The specific section of the
19 forest management plan that provides documentation of the exception is also
20 referenced in this list.

21
22 **There are no forest management activities included in this plan that are**
23 **“Exceptions”.**



Forest Management Plan Contributors

Forest Management Plan for the **Kenora Forest**

Kenora District, Northwest Region, Ontario Ministry of Northern Development and Mines,
Natural Resources and Forestry,
Miisun Integrated Resource Management Company on behalf of Miitigoog LP
for the 10-year period from April 1, 2022 to March 31, 2032.

Planning Team Members

Member	Affiliation	Role
Kurt Pochailo, R.P.F.	Miisun Integrated Resource Management Company	Plan Author, Planning Team Chair, SFL Lead
Lauren Peterson, R.P.F.	NDMNRF - Northwest Region	Regional Planning Forester, NDMNRF Lead
Susan Jarvis, R.P.F.	Forest Concepts	Project Manager, FMP Planning Consultant
Donna Puls	Miisun Integrated Resource Management Company	G.I.S. Applications Specialist
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Christy MacDonald	NDMNRF – Kenora District	Resource Liaison Specialist
Virginia Thompson	NDMNRF - Northwest Region	Acting Regional Planning Biologist
Dean Caron Dave Canfield (Alternate)	Kenora Local Citizens' Committee	LCC Representative
Abigail Williams, (R.P.F. in Training)	Weyerhaeuser - Kenora	Collective Representative of Wood Supply Commitments
Albert Handorgan	Anishinaabeg of Naongashiing (Big Island)	First Nation Community Representative
Alex Tom	Nootkamegwanning First Nation (Whitefish Bay)	First Nation Community Representative



Planning Team Member	Affiliation	Role
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Marvin McDonald	Wabaseemoong Independent Nations (Whitedog)	First Nation Community Representative
Vacant	Métis Nation of Ontario, Region One Consultation Committee	RICC Representative
Vacant	Animakee Wa Zhing No. 37 (Northwest Angle No. 37 First Nation)	First Nation Community Representative
Vacant	Asubpeeschoseewagong Netum Anishinabek (Grassy Narrows First Nation)	First Nation Community Representative
Vacant	Iskatewizaagegan No. 39 Independent First Nation (Shoal Lake 39)	First Nation Community Representative
Vacant	Mishkosiminiziibing First Nation (Big Grassy River)	First Nation Community Representative
Vacant	Northwest Angle No. 33 First Nation	First Nation Community Representative
Vacant	Ojibways of Onigaming First Nation (Sabaskong / Onigaming)	First Nation Community Representative
Vacant	Shoal Lake No. 40 First Nation	First Nation Community Representative
Vacant	Wabauskang First Nation	First Nation Community Representative
Vacant	Washagamis Bay	First Nation Community Representative
Vacant	Wauzhusk Onigum Nation (Rat Portage)	First Nation Community Representative

1 **Planning Team Advisors and Key Support**

2

Miisun Integrated Resource Management Company	Position
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Dan McMahon	Area Enforcement Manager
Megan Park John Myshrall	Integrated Resource Management Technical Specialist
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Meagan Saunders	Acting Lands & Waters Technical Specialist
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Scott Hole, R.P.F., Rob Bowen, R.P.F.	Regional Analysts
Garnet Beemer	Regional Analyst
Gwenyth Foley	Forest Industry Liaison
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Renee Bellini	Cultural Heritage Specialist
Laura Darby	Acting Regional Planning Ecologist
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Katherine Onyshkewych	Senior Parks Planner, Ontario Parks
Lori Skitt	Park Superintendent – Woodland Caribou Provincial Park



Ministry of Tourism, Culture and Sport	
James Antler	Policy Advisor
Paige Campbell	Regional Archaeologist

1

2 Kenora Local Citizens' Committee Members

3	Clarke Anderson, Chair	Alasdair Mowat
4	Pat Rheault	Dave Canfield
5	Garth Collins	Karen Cederwall
6	Mark Scott	Sandra Triskle
7	Dean Caron	Hayley Anderson

8

9 The Kenora Local Citizens' Committee (LCC) consists of local citizens representing a
10 broad range of interests in forest management. Many have the knowledge and ability to
11 provide expert advice on resource-related matters. One LCC member was invited to
12 participate as a member of the FMP planning team and to act primarily as a liaison
13 between the planning team and the LCC.

14

15 The committee's report on its involvement in the planning process is included in
16 Supplementary Documentation K of the FMP.

17

18 After review of the draft FMP and presentation of the final FMP, the committee provided
19 a statement of general agreement or disagreement with the FMP:

20

21 "The KLCC appreciates the hard work involved by the Company, NDMNRF
22 District and Region in preparing the 2022-2032 FMP. Company representatives
23 and NDMNRF staff have kept the KLCC well informed. The preparation and
24 review of the FMP is based on the applicable forest management planning
25 requirements and guidelines, operational prescriptions which balance the
26 protection of all forest values, public and First Nation interests with the needs of
27 the forest industry.

28

29 During the October 27, 2021 meeting, the LCC was presented with the Final Plan
30 by the Plan Author. Overall the committee was very supportive of the current
31 Final Plan. Following the presentation of the Final Plan and subsequent
32 discussions, the Kenora Local Citizens' Committee would like to indicate their
33 support of the Kenora Forest 2022-2032 Forest Management Plan. The Kenora
34 Local Citizens' Committee is looking forward to plan approval effective April 1,
35 2022 and subsequent implementation through the planning term."

36



1 **Plan Reviewers**

2

3 Any **Plan Advisor** who has provided direction during the production of this Forest

4 Management Plan will be required to ensure that sections of the plan pertaining to their

5 advice are reviewed.

6

NDMNR – Kenora District	Position
Kyle Myschowoda, R.P.F.	Management Forester
Peter Hettinga	Management Biologist
Christy McDonald	Resource Liaison Specialist
Erik Lockhart	Acting District Planner
Meagan Saunders	Acting Lands & Waters Technical Specialist
Jim McNulty	Fish & Wildlife Technical Specialist
Pat Harvey	Fire Management Supervisor
Megan Park John Myshrall	Integrated Resource Management Technical Specialist
NDMNR Region/Province	Position
Lauren Peterson R.P.F.	Regional Planning Forester
Stephen Yeung, R.P.F.	Acting Regional Forest Management Planning Specialist
Scott Hole, R.P.F.	Regional Planning Analyst
Virginia Thompson	Acting Regional Planning Biologist
Gwenyth Foley	Forest Industry Liaison
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Laura Darby	Acting Regional Planning Ecologist
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Ministry of the Environment, Conservation and Parks (MECP)	
Katherine Onyshkewych	Senior Parks Planner, Ontario Parks
Lori Skitt	Park Superintendent - Woodland Caribou Provincial Park
Matt Yeo	Park Superintendent – Ontario Parks

7



Preface

Forest management on Crown land in Ontario is the ultimate responsibility of the Ontario Minister of Northern Development, Mines, Natural Resources and Forestry (NDMNR). The Crown forest of Ontario is subdivided into forests or management units for the purpose of forest management. The Crown may delegate the responsibility for many aspects of forest management to companies through the licensing of Sustainable Forest Licences for particular management units. Planning is done through the use of forest management plans for a 10-year period and will normally be renewed every ten years. The strategic, long-term planning and the operational planning for the 10-year plan period are conducted prior to final plan approval. The implementation of operations is scheduled annually in an Annual Work Schedule (AWS) to provide the link between the work approved in the forest management plan and the required financial resources on an annual basis.

Forest management plans must be prepared in accordance with the planning requirements described in the *Forest Management Planning Manual* (MNRF, 2020). This manual is referenced in this plan as the “FMPM”, “FMP Manual” or “Forest Management Planning Manual”. Forest management plans must also be prepared in accordance with the *Forest Information Manual* (MNRF, 2020)(FIM). Each forest management plan must be prepared by a professional forester registered under *Bill 110, the Ontario Professional Foresters Act, 2000* in an open and consultative fashion with the assistance of an interdisciplinary planning team and a Local Citizens’ Committee(s) (LCC).

Miisun Integrated Resource Management Company in Kenora, Ontario has prepared this Kenora Forest management plan on behalf of Miitigoog LP. Throughout this plan, Miitigoog LP will be referred to as “Miitigoog”, “the SFL holder” or “the company.” All FMP related activities conducted by Miisun Integrated Resource Management Company are on behalf of Miitigoog LP.

A Forest Management Plan Summary has been prepared and is available at <https://nrp.mnr.gov.on.ca> or by contacting the Kenora District Office of the Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry.

FINAL PLAN NOTE: After the Draft Forest Management Plan was submitted to NDMNR in June 2021, significant wildfires occurred in the Kenora District that affected the Kenora Forest. The impacts of these wildfires were analyzed and noted (“**FINAL PLAN NOTE**”) in this final FMP as applicable, including some adjustment to operations to remain as consistent as possible with the Long-term Management Direction.



1 The impact of recent wildfires on the Plan Start 2022 forest condition is described
2 relative to biodiversity indicators in Section 2.1.3.2 (landscape class area, old growth
3 area, area old red pine and white pine forest unit, young forest area, landscape pattern)
4 and Section 2.1.3.3.4 (Species at Risk, caribou habitat). Text Section 4.9 further
5 documents the impacts of recent wildfires and adjusted final planned operations on
6 achievement of management objectives and the rationale to support the implementation
7 of this FMP in accordance with the Long-term Management Direction (Section 3).

1 **TABLE OF CONTENTS**

2 **TITLE, CERTIFICATION AND APPROVAL PAGE II**

3 **PLAN COMPONENTS NOT PREPARED BY THE PLAN AUTHOR..... III**

4 **FOREST MANAGEMENT PLAN - LIST OF EXCEPTIONS IV**

5 **FOREST MANAGEMENT PLAN CONTRIBUTORS V**

6 Planning Team Members v

7 Planning Team Advisors and Key Support..... vii

8 Kenora Local Citizens’ Committee Members viii

9 Plan Reviewersix

10 **PREFACE X**

11 **TABLE OF CONTENTS 1**

12 **LIST OF TABLES..... 6**

13 **LIST OF FIGURES 8**

14 **LIST OF SUPPLEMENTARY DOCUMENTATION 9**

15 **LIST OF DIGITAL FMP FILE NAMES 10**

16 **1.0 INTRODUCTION 12**

17 **1.1 Location of the Kenora Forest 12**

18 **1.2 Management Responsibilities..... 14**

19 **2.0 MANAGEMENT UNIT DESCRIPTION 17**

20 **2.1 Forest Description 18**

21 2.1.1 Historic Forest Condition 18

22 2.1.2 Current Forest Condition 21

23 2.1.3 Forest Classification 23

24 2.1.3.1 Forest Units and Analysis Units 23

25 2.1.3.2 Forest Landscape Classes 29

26 2.1.3.3 Other Forest Classifications..... 45

27 2.1.4 Forest Resources 60

28 2.1.4.1 Inventories and Information for Species at Risk 60



TABLE OF CONTENTS

		Page No.:
1	2.1.4.2 Fish and Wildlife Inventories	87
2	2.1.4.3 Values Information	96
3	2.2 Social and Economic Description	115
4	2.2.1 Overview of Social and Economic Context	115
5	2.2.2 Summary of Demographic Profiles	116
6	2.2.3 Industrial and Non-Industrial Uses of the Forest	119
7	2.2.3.1 Forestry and Wood Products	119
8	2.2.3.2 Recreation and Tourism	123
9	2.2.3.3 Mining, Aggregate and Hydro Generation	126
10	2.2.3.4 Other Uses	128
11	2.3 First Nation and Métis Background Information Report.....	130
12	3.0 LONG-TERM MANAGEMENT DIRECTION.....	132
13	3.1 Introduction	132
14	3.2 Management Considerations	133
15	3.3 Base Model	143
16	3.3.1 Analysis of Silvicultural Activities	143
17	3.3.2 Analysis of Past Silvicultural Performance	145
18	3.4 Desired Forest and Benefits.....	147
19	3.5 Strategic Management Zones	157
20	3.6 Objectives and Indicators	159
21	3.6.1 General Approach to Determining Desirable Levels for Indicators	159
22	3.6.2 Plan Management Objectives, Indicators and Desirable Levels.....	161
23	3.6.2.1 Objective 1: Caribou Habitat	162
24	3.6.2.2 Objective 2: Forest Composition.....	168
25	3.6.2.3 Objective 3: Landscape Pattern.....	173
26	3.6.2.4 Objective 4: Moose Habitat.....	176
27	3.6.2.5 Objective 5: Forest Access	179
28	3.6.2.6 Objective 6: Wood Supply	180
29	3.6.2.7 Objective 7: Indigenous Engagement	183
30	3.6.2.8 Objective 8: Local Citizens' Committee Engagement	183
31	3.6.2.9 Objective 9: Forest Renewal.....	184
32	3.6.2.10 Objective 10: Forest Values.....	186
33	3.6.2.11 Objective 11: Healthy Ecosystems	187
34	3.7 Long-Term Management Direction	189
35	3.7.0 Introduction.....	189
36	3.7.0.1 Analysis Package	191
37	3.7.0.1 Projected Forest Condition for the Crown Productive Forest.....	192
38	3.7.0.2 Habitat for Selected Wildlife Species	194
39	3.7.1 Available Harvest Area and Volumes	195
40	3.7.1.1 Available Harvest Area	195



TABLE OF CONTENTS

		Page No.:
1	3.7.1.2 Available Harvest Volume	199
2	3.7.1.3 Spatial Distribution of Harvest	203
3	3.7.2 Selection of Areas for Harvest.....	206
4	3.7.3 Assessment of Objective Achievement	212
5	3.7.3.1 Objective 1: Caribou Habitat.....	213
6	3.7.3.2 Objective 2: Forest Composition.....	218
7	3.7.3.3 Objective 3: Landscape Pattern.....	222
8	3.7.3.4 Objective 4: Moose Habitat.....	224
9	3.7.3.5 Objective 6: Wood Supply	227
10	3.7.3.6 Objective 7: Indigenous Engagement.....	230
11	3.7.3.7 Objective 8: Local Citizens' Committee Engagement	232
12	3.7.3.8 Summary of Indicators Measured After Plan Implementation.....	234
13	3.7.3.9 Conclusion of Assessment of Objective Achievement	236
14	3.7.4 Spatial Assessment of Projected Harvest Area	238
15	3.7.5 Social and Economic Assessment	240
16	3.7.6 Risk Assessment.....	241
17	3.7.7 Preliminary Determination of Sustainability	242
18	4.0 PLANNED OPERATIONS.....	244
19	4.1 Introduction	244
20	4.2 Prescriptions for Operations.....	245
21	4.2.1 Operational Prescriptions and Conditions for Areas of Concern	245
22	4.2.1.1 Tourism Values and Resource Stewardship Agreements (RSAs)	250
23	4.2.1.2 AOC Prescriptions for Cultural Heritage Values	252
24	4.2.1.3 Operational Prescriptions and Conditions for Areas of Concern Information	
25	Products	253
26	4.2.2 Prescriptions for Harvest, Renewal and Tending Areas	254
27	4.2.2.1 Silvicultural Ground Rules	254
28	4.2.2.2 Conditions on Regular Operations.....	257
29	4.3 Harvest Operations	286
30	4.3.1 Harvest Areas.....	286
31	4.3.1.1 Operational Considerations for Specific Harvest Operating Areas	290
32	4.3.2 Stand Level Residual in Harvest Areas	292
33	4.3.2.1 25 in 500 ha Analysis Results.....	293
34	4.3.2.2 5 of 25 ha (20%) Analysis Results	294
35	4.3.2.3 0.5 in 50 ha Analysis Results.....	294
36	4.3.3 Completion of On-going Harvest Operations from Previous Plan.....	296
37	4.3.4 Fuelwood Areas	297
38	4.3.5 Harvest Volume.....	298
39	4.3.6 Wood Utilization	300
40	4.3.7 Salvage	302
41	4.3.8 Contingency Area and Volume.....	302
42	4.3.9 Harvest Area Information Products	303
43	4.4 Renewal and Tending Operations	304
44	4.4.1 Renewal and Tending Areas	304
45	4.4.1.1 Regeneration	305

TABLE OF CONTENTS

		Page No.:
1	4.4.1.2 Site Preparation.....	306
2	4.4.1.3 Tending.....	307
3	4.4.1.4 Planned Treatments by Forest Unit	307
4	4.4.2 Renewal Support.....	308
5	4.4.2.1 Tree Improvement	308
6	4.4.2.2 Seed Collection and Planting Stock Procurement	308
7	4.5 Roads.....	310
8	4.5.1 Primary and Branch Roads	310
9	4.5.2 Operational Roads	316
10	4.5.3 Area of Concern Crossings – Primary and Branch Roads	317
11	4.5.4 Area of Concern Crossings – Operational Roads.....	320
12	4.5.5 Existing Roads	322
13	4.5.5.1 Road Information Products	325
14	4.5.6 Roads Water Crossings	326
15	4.5.7 Forestry Aggregate Pits.....	326
16	4.5.7.1 Aggregate Extraction Area Information Products.....	330
17	4.5.8 Wood Storage Yards	331
18	4.5.9 Conditions on Roads, Landings and Aggregate Pits	333
19	4.6 Expenditures	347
20	4.7 Monitoring and Assessment	349
21	4.7.1 Forest Operations Inspections.....	349
22	4.7.1.1 Compliance Goal	350
23	4.7.1.2 Background	350
24	4.7.1.3 Objectives, Strategies and Actions	352
25	4.7.1.4 Risk Analysis and Management.....	356
26	4.7.1.5 Roles and Responsibilities.....	360
27	4.7.1.6 Notification of Status.....	363
28	4.7.1.7 Prevention, Avoidance and Mitigation.....	365
29	4.7.1.8 Compliance Reporting Areas	366
30	4.7.1.9 Monitoring Compliance of Forest Operations	367
31	4.7.1.10 Opportunities for LCC Involvement.....	369
32	4.7.1.11 NDMNRF District Auditing and Inspection Program	370
33	4.7.2 Exceptions.....	371
34	4.7.3 Assessment of Regeneration Success.....	371
35	4.7.4 Roads and Water Crossings.....	374
36	4.8 Fire Prevention and Preparedness	376
37	4.8.1 Fire Prevention.....	376
38	4.8.2 Fire Preparedness.....	378
39	4.8.3 Modified Fire Response	380
40	4.9 Comparison of Planned Operations to the Long-Term Management Direction	384
41	4.9.0 Revision of Plan Start 2022 Land Base Resulting from 2021 Wildfires	385
42	4.9.1 Comparison of the planned harvest, renewal and tending operations to the	
43	projections in the LTMD	386
44	4.9.2 Comparison of the Distribution of Harvest to the Projections in the LTMD.....	389
45	4.9.3 Comparison of Stand Conditions of the Planned Harvest Areas and Eligible	
46	Harvest Areas.....	391



TABLE OF CONTENTS

		Page No.:
1	4.9.4 Effect of the Age Class Distribution and the Projected Harvest Volume on the	
2	Achievement of the LTMD.....	392
3	4.9.5 Effect of the Amount of Projected Unutilized Harvest Volume on the Achievement	
4	of the LTMD.....	392
5	4.9.6 Effect on Objective Achievement and Sustainability of Implementation of Planned	
6	Operations.....	393
7	4.9.7 Conclusion of the Comparison of Planned Operations to the LTMD	408
8	4.9.8 NDMNRF Decision and Rationale for Continued Use of LTMD for 2022-2032 FMP	
9	after 2021 Wildfires	409
10	5.0 DETERMINATION OF SUSTAINABILITY.....	411
11	5.1 Assessment of Management Objective Achievement	411
12	5.2 Spatial Assessment	413
13	5.3 Social and Economic Assessment	415
14	5.4 Risk Assessment	416
15	5.5 Conclusion on the Sustainability of the FMP	418
16	6.0 DOCUMENTATION	419
17	6.1 Supplementary Documentation	419
18	6.2 Other Documentation	419
19	7.0 FOREST MANAGEMENT PLAN SUMMARY	419
20	8.0 FOREST MANAGEMENT PLAN TABLES	420
21		



1 **List of Tables**
 2
 3 **FMP Tables:** (located in FMP file MU644_2022_FMP_TBL_Tables.PDF)
 4
 5 FMP-1: Management Unit Crown Land Summary
 6 FMP-2: Description of Forest Units
 7 FMP-3: Summary of Managed Crown Productive Forest by Forest Unit
 8 FMP-4: Silvicultural Ground Rules
 9 FMP-5: Post-harvest Renewal Transition Rules
 10 FMP-6: Projected Forest Condition for the Crown Productive Forest
 11 FMP-7: Projected Habitat for Selected Wildlife Species
 12 FMP-8: Projected Available Harvest Area by Forest Unit
 13 FMP-9: Projected Available Harvest Volume by Species Group and Broad Size Group
 14 FMP-10: Assessment of Objective Achievement
 15 FMP-11: Operational Prescriptions for Areas of Concern and Conditions on Roads,
 16 Landings, and Forestry Aggregate Pits
 17 FMP-12: Planned Harvest Area
 18 FMP-13: Planned Harvest Volume by Species
 19 FMP-14: Planned Harvest Volume and Wood Utilization
 20 FMP-15: Projected Wood Utilization by Mill
 21 FMP-16: Contingency Harvest Area and Volume
 22 FMP-17: Planned Renewal and Tending Operations
 23 FMP-18: Road Construction and Use Management
 24 FMP-19: Planned Expenditures
 25 FMP-20: Planned Assessment of Establishment
 26
 27 **Additional Tables in FMP Text:**
 28 Table 1 Relationship Between Plan Forest Units and Other Forest Unit
 29 Classifications 25
 30 Table 2 Relationship of Analysis Units to Plan Forest Units 26
 31 Table 3 Summary of Available and Unavailable Plan Forest Unit Area from FMP-3 27
 32 Table 4 Milestones for Forest Composition, Structure, and Pattern for the Kenora
 33 Forest from the Boreal Landscape Guide 43
 34 Table 5 Species at Risk on the Kenora Forest 62
 35 Table 6 Population Objective Ranges for Moose in Wildlife Management Units that
 36 Overlap the Kenora Forest 91
 37 Table 7 Parks and Protected Areas on, or adjacent to, the Kenora Forest 104
 38 Table 8 Population, Employment Rate and Forestry Employment Dependency Ratio
 39 for Communities Dependent on Wood Flow from the Kenora Forest 118
 40 Table 9 Wood Supply Commitments for the Kenora Forest 120
 41 Table 10 Destinations of Wood from the Kenora Forest 2012-2019 121
 42 Table 11 Crown Charges 2012-2019 122
 43 Table 12 Amount of Caribou Habitat Desirable and Target Levels 164
 44 Table 13 Desirable and Target Levels for Texture of Caribou Winter Combined
 45 Habitat 165
 46 Table 14 Desirable and Target Levels for Texture of Caribou Refuge Habitat 166



		Page No.:
1	Table 15	Desirable and Target Levels for Conifer Purity 167
2	Table 16	Desirable and Target Levels for Online Caribou DCHS %..... 168
3	Table 17	Desirable and Target Levels by Landscape Class..... 169
4	Table 18	Desirable and Target Levels by Old Growth Grouping 170
5	Table 19	Desirable and Target Levels for Upland Conifer 172
6	Table 20	Desirable and Target Levels for Young Forest 172
7	Table 21	Desirable and Target Levels for Mature and Old Forest Texture 174
8	Table 22	Desirable and Target Levels for Young Forest Patch Size Frequency..... 175
9	Table 23	Desirable and Target Levels for Moose Habitat by MEA 177
10	Table 24	Desirable and Target Levels for Young Forest Frequency by MEA 178
11	Table 25	Change in Productive Forest Area by Forest Unit 193
12	Table 26	Projected Caribou Habitat in Caribou Zone Through Time 194
13	Table 27	Comparison of 10-year AHA by Forest Unit 2012 and 2022 FMPs..... 197
14	Table 28	Lower Average Harvest Operability Limits by Forest Unit and YIELD..... 209
15	Table 29	Projected Caribou Habitat Area..... 214
16	Table 30	Assessment of Caribou Winter Habitat Texture 2022-2032 215
17	Table 31	Assessment of Caribou Refuge Habitat Texture 2022-2032..... 216
18	Table 32	Projected Crown Productive Forest by Landscape Class 218
19	Table 33	Projected Crown Productive Forest by Old Growth Grouping..... 219
20	Table 34	Projected Crown Productive Forest – Three BLG Indicators 220
21	Table 35	Assessment of Mature and Old Forest Texture 2022-2032 222
22	Table 36	Assessment of Young Forest Patch Size Frequency 2022-2032 223
23	Table 37	Assessment of Moose Habitat by MEA 224
24	Table 38	Assessment of Frequency of Young Forest Patch Size by MEA 226
25	Table 39	Projected Available Forest Area Through Time 227
26	Table 40	Results of LCC Self-Assessment of Effectiveness Survey 233
27	Table 41	2022 FMP AOC Codes and Corresponding 2012 FMP AOC Codes 246
28	Table 42	Most Common SGR and Renewal Treatment by Forest Unit 255
29	Table 43	Conditions on Regular Operations (CROs) 259
30	Table 44	Kenora Forest Overlapping Forest Resource Licensees (OFRLs)..... 287
31	Table 45	Areas Requiring Additional Residual (25 in 500 ha Analysis) 293
32	Table 46	Areas Requiring Additional Residual (5 in 25 ha Analysis) 294
33	Table 47	Bridging Harvest Areas 296
34	Table 48	Tree Seed Collection Forecast 2022-2032 309
35	Table 49	Planting Stock Forecast 2022-2032 309
36	Table 50	Conditions on Roads, Landings and Aggregate Pits (CORLAPs) 334
37	Table 51	Risk Ranking Table 358
38	Table 52	Summary of Compliance Responsibilities 360
39	Table 53	Inspection Reporting Times..... 363
40	Table 54	Comparison of LTMD and Planned Harvest by Forest Unit 2022-2032 387
41	Table 55	Comparison of LTMD and Planned Renewal Treatments 2022-2032..... 388
42	Table 56	Comparison of LTMD and Planned Harvest by Subunit 2022-2032..... 389
43	Table 57	Variance between LTMD and Planned Harvest Average Stand Conditions
44	 391
45	Table 58	Comparison of Projected Objective Achievement between LTMD and Final
46		Plan with revised Plan Start 2022 394
47		



		Page No.:
1	List of Figures	
2		
3	Figure 1	Location of the Kenora Forest in Northwestern Ontario 13
4	Figure 2	Organizational Structure of Miitigoog and Miisun 16
5	Figure 3	Mapped Wildfires in the Kenora Forest by Decade 1960-2021 20
6	Figure 4	Landscape Class Indicator Achievement for 2022 Plan Start..... 30
7	Figure 5	Old Growth Indicator Achievement for 2022 Plan Start 31
8	Figure 6	Upland Conifer Indicator Achievement for 2022 Plan Start 33
9	Figure 7	Young Forest Indicator Achievement for 2022 Plan Start..... 34
10	Figure 8	Mature and Old Texture Indicator Achievement – 2022 Plan Start (500 ha scale)..... 36
11		
12	Figure 9	Mature and Old Texture Indicator Achievement – 2022 Plan Start (5,000 ha scale)..... 36
13		
14	Figure 10	Landscape Pattern Texture of Mature and Old (500 ha scale) 37
15	Figure 11	Landscape Pattern Texture of Mature and Old (5,000 ha scale) 38
16	Figure 12	Young Forest Frequency by Size Class Indicator for 2022 Plan Start 39
17	Figure 13	Size Distribution of Young Forest Patches at 2022 Plan Start..... 40
18	Figure 14	Caribou Refuge Habitat Indicator Achievement for 2022 Plan Start 51
19	Figure 15	Caribou Winter Habitat Indicator Achievement for 2022 Plan Start 51
20	Figure 16	Caribou Refuge Habitat Texture Indicator Achievement – 2022 Plan Start (60 km ² scale)..... 53
21		
22	Figure 17	Caribou Refuge Habitat Texture Indicator Achievement – 2022 Plan Start (300 km ² scale)..... 53
23		
24	Figure 18	Landscape Pattern Texture of Caribou Refuge Habitat (60 km ² scale) ... 54
25	Figure 19	Landscape Pattern Texture of Caribou Refuge Habitat (300 km ² scale) . 55
26	Figure 20	Caribou Winter Habitat Texture Indicator Achievement – 2022 Plan Start (60 km ² scale)..... 57
27		
28	Figure 21	Caribou Winter Habitat Texture Indicator Achievement – 2022 Plan Start (300 km ² scale)..... 57
29		
30	Figure 22	Landscape Pattern Texture of Caribou Winter Habitat (60 km ² scale)..... 58
31	Figure 23	Landscape Pattern Texture of Caribou Winter Habitat (300 km ² scale).. 59
32	Figure 24	Location of the Kenora Forest (red outline) with Respect to NDMNRF’s Wildlife Management Units in northwestern Ontario..... 90
33		
34	Figure 25	Location of the Kenora Forest (blue outline) with Respect to NDMNRF’s Cervid Ecological Zones (CEZ) in northwestern Ontario 92
35		
36	Figure 26	Management Zones (Subunits) for the 2022 Kenora Forest FMP 158
37	Figure 27	Projected Crown Productive Forest Unit Area Through Time 193
38	Figure 28	Annualized Available Harvest Area by Forest Unit 2022-2032 195
39	Figure 29	Planned and Actual Annual Harvest Area Comparisons 1991-2122 196
40	Figure 30	Planned and Actual Harvest Volume Comparisons, Species Group – Total 201
41		
42	Figure 31	Planned and Actual Harvest Volume Comparisons, Species Group – Spruce-Pine-Fir 201
43		
44	Figure 32	Planned and Actual Harvest Volume Comparisons, Species Group – Poplar 202
45		



		Page No.:
1	Figure 33	Planned and Actual Harvest Volume Comparisons, Species Group –
2		White Birch 202
3	Figure 34	Projected Distribution of 40 Year Harvest Zones 2022-2062..... 205
4	Figure 35	Projected Total Available Harvest Area 2022-2172..... 228
5	Figure 36	Projected Total Available Harvest Volume 2022-2172 229
6	Figure 37	Comparison of 10-Year Harvest Area by Forest Unit 288
7	Figure 38	Comparison of 10-Year Harvest Area by 20-Year Age Class..... 289
8	Figure 39	Available and Planned Harvest Volumes 2022-2032 by Forest Unit 299
9	Figure 40	Kenora Forest Candidate Locations for “Allow Fire” and “Limit Fire” 383
10	Figure 41	Comparison of Available Harvest Area and Planned Harvest Area by
11		Forest Unit 2022-2032 386
12		

List of Supplementary Documentation

- 13
- 14
- 15 (located in FMP file MU644_2022_FMP_ TXT_SuppDoc.PDF)
- 16 **A** - Historic Forest Condition
- 17 **B** - Analysis Package (contained in file MU644_2022_FMP_ TXT_AnPack.PDF)
- 18 **C** - First Nation and Métis Background Information Reports
- 19 **D** - Summary of First Nation and Métis Involvement
- 20 **E** - Social and Economic Description
- 21 **F** - Monitoring Program for Exceptions
- 22 **G** - Monitoring Program for Success of Silvicultural Activities
- 23 **H** - Primary Road Planning
- 24 **I** - Area of Concern Planning
- 25 **J** - Summary of Public Consultation
- 26 **K** - Local Citizens’ Committee Report
- 27 **L** - Final List of Required Alterations
- 28 **M** - Planning Team’s Terms of Reference
- 29 **N** - Statement of Environmental Values
- 30 **O** - DFO – NDMNRF Water Crossing Standards Protocol
- 31 **P** – In-water Work Timing Window Guidelines
- 32 **Q** – Vermilion Lake Operational Management Zone



1 List of Digital FMP File Names

2
3 Electronic FMP packaged into a single compressed file **MU644_2022_FMP.zip**
4

5 File Name:	Plan Component:
6 MU644_2022_FMP_TXT_PlanText.pdf	Plan Text
7 MU644_2022_FMP_TBL_Tables.pdf	Plan Text Tables
8 MU644_2022_FMP_TXT_AnPack.pdf	Supp. Doc. B – Analysis Package
9 MU644_2022_FMP_TXT_SuppDoc.pdf	Supp. Docs. A, C-P compiled into 1 file

10

11 FMP Maps:

12 MU644_2022_FMP_MAP_Index_01.pdf	FMP Index Map (scale 1:110,000) Harvest, renewal and tending, roads.
14 MU644_2022_FMP_MAP_Ops#####_00.pdf	Several Operations Maps by OBM # (scale 1:20,000)

15

16

17 Values Maps (scale 1:100,000):

18 MU644_2022_FMP_MAP_ValWild_00.pdf	Natural Resource Features – Flora & Fauna
19 MU644_2022_FMP_MAP_ValFish_00.pdf	Natural Resource Features - Fisheries & Wetlands
21 MU644_2022_FMP_MAP_ValRec_00.pdf	Resources Uses
22 MU644_2022_FMP_MAP_ValLand_00.pdf	Land Values (excluding existing roads responsibility)
24 MU644_2022_FMP_MAP_ValBMA_00.pdf	Bear Management Areas
25 MU644_2022_FMP_MAP_ValTrap_00.pdf	Trap Line Areas
26 MU644_2022_FMP_MAP_ValRBT_00.pdf	Resource-based Tourism Values
27 MU644_2022_FMP_MAP_ValCult_00.pdf	Cultural Heritage Values, First Nation and Métis Values *

28
29 * The Cultural Heritage Values map is not available in the FMP - Information is retained at
30 NDMNRF District Office.

31

32 Spatial Analysis Maps:

33

34 Landscape Pattern:

35 MU644_2022_FMP_MAP_LandPat_01.PDF	Landscape Pattern-2022 Young Forest
36 MU644_2022_FMP_MAP_LandPat_02.PDF	Landscape Pattern-2022 BLG Landscape Class
37 MU644_2022_FMP_MAP_LandPat_03.PDF	Landscape Pattern-2022 revised Young Forest
38 MU644_2022_FMP_MAP_LandPat_04.PDF	Landscape Pattern-2022 rev. BLG Landscape Class
39 MU644_2022_FMP_MAP_LandPat_05.PDF	Landscape Pattern-2032 Young Forest
40 MU644_2022_FMP_MAP_LandPat_06.PDF	Landscape Pattern-2032 BLG Landscape Class
41 MU644_2022_FMP_MAP_DistHarv_00.pdf	Projected Distribution of Harvest – 2022-2062



1	Folder: MU644_2022_FMP_LAYERS	Inventory and Operational Planning Geospatial
2		Data
3	MU644_2022_FMP.ZIP	
4	MU644_2022_FMP.gdb	
5	MU644_22PCI00	Planning Composite Inventory
6	MU644_22OPI00	Operational Planning Inventory
7	MU644_22FDP00	Forecast Depletions
8	MU644_22BMI00	Base Model Inventory
9	MU644_22PHR00	Planned Harvest
10	MU644_22PRP00	Planned Residual
11	MU644_22AOC00	Areas of Concern
12	MU644_22PRC00	Planned Road Corridor
13	MU644_22WSY00	Wood Storage Yard
14	MU644_22ORB00	Operational Road Boundaries
15	MU644_22ERU00	Existing Road Use Management Strategy
16	MU644_22WXI00	Water Crossing Inventory
17	MU644_22PAG00	Planned Aggregate Extraction Area
18	MU644_22IMP00	Tree Improvement with Renewal and Tending
19		
20	File: MU644_2022_FMP_MDL_ModelFiles.zip	
21	File: MU644_2022_FMP_MDL_README.pdf	Listing of all model files
22	File: MU644_2022_FMP_MDL_SFMM.zip	
23		Contains the SFMM model case files for key investigations and LTMD
24	File: MU644_2022_FMP_MDL_MIST.zip	
25		Contains the three MIST files used for Yield Curve development
26	File: MU644_2022_FMP_MDL_OLT.zip	
27		Contains OLT export scenarios for Plan Start 2022 and Plan End 2032
28	File: MU644_2022_FMP_MDL_eFRT.zip	
29		Contains eFRT file for Plan End 2032
30		

File Name:	Plan Component:
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31	A Forest Management Plan Summary has been prepared in and is located in electronic files:	
32		
33	MU644_2022_FMP_TXT_Sum.PDF	FMP Summary Text (English)
34	MU644_2022_FMP_TXT_SumFR.PDF	FMP Summary Text (French)
35	MU644_2022_FMP_MAP_Sum_00.PDF	FMP Summary Map (English)
36	MU644_2022_FMP_MAP_SumFR_00.PDF	FMP Summary Map (French)
37		
38		

39 The FMP Summary is also available at <https://nrp.mnr.gov.on.ca> or by contacting the Kenora
 40 District Office of the Ontario Ministry of Northern Development, Mines, Natural Resources and
 41 Forestry.



1 **1.0 INTRODUCTION**

2
3 The Forest Management Plan (FMP) establishes long-term strategic direction and
4 identifies short-term operational goals for managing forest resources on the Kenora
5 Forest management unit.

6
7 The *Crown Forest Sustainability Act* and the *Environmental Assessment Act* provide the
8 legislative framework for forest management on Crown lands in Ontario. The forest
9 management planning requirements and the provisions of the environmental
10 assessment approval are incorporated into the *Forest Management Planning Manual*
11 (MNRF, 2020) and the *Forest Information Manual* (MNRF, 2020)(FMPM), which
12 provides direction for the preparation of forest management plans.

13
14 The *Crown Forest Sustainability Act* requires that each forest management plan
15 provides for the long-term health of the Crown forest and have regard for plant life,
16 animal life, water, soil, air and social and economic values, including recreational values
17 and heritage values. The forest management plan meets these requirements by
18 developing and incorporating a management strategy that balances objectives related
19 to forest diversity, socio-economics, forest cover and silviculture. This FMP identifies a
20 set of indicators that are monitored and assessed over time to determine the
21 effectiveness of activities in achieving management objectives and to assess the
22 sustainability of the forest.

23
24 Forest management on Crown land in Ontario is the ultimate responsibility of the
25 Ontario Minister of Northern Development, Mines, Natural Resources and Forestry
26 (NDMNRF). The Crown forest of Ontario is subdivided into forests or management
27 units for the purpose of forest management. The Crown may delegate the responsibility
28 for many aspects of forest management to companies through the issuing of
29 Sustainable Forest Licences (SFL) for particular management units.

30
31 **1.1 Location of the Kenora Forest**

32
33 The Kenora Forest surrounds the communities of Kenora, Redditt, Minaki, Sioux
34 Narrows and Nestor Falls.

35
36 The Kenora Forest (Management Unit #644) is located in the Northwest Region of the
37 Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry
38 (NDMNRF) and is administered from the Kenora District Office with administrative
39 support from the NDMNRF Northwest Region Office in Thunder Bay. The NDMNRF

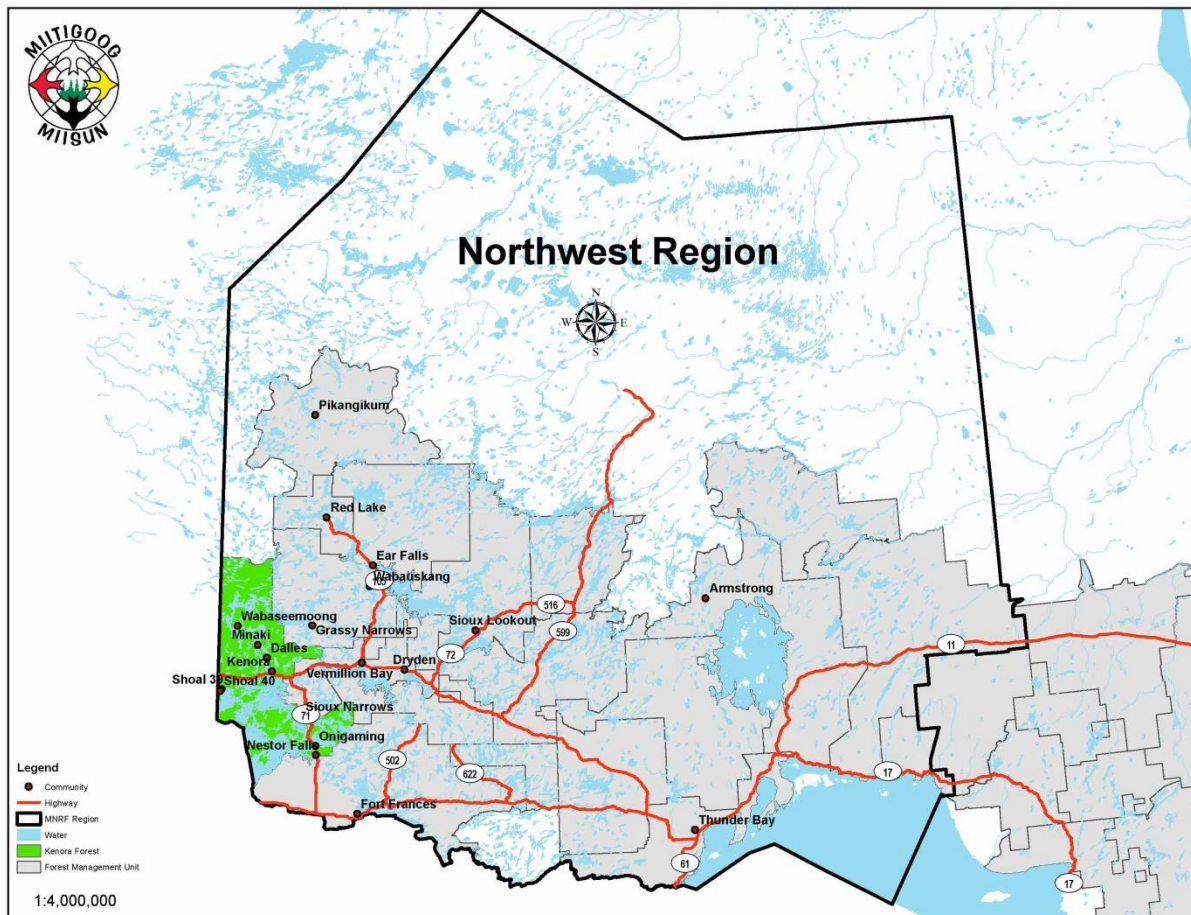


1.0 INTRODUCTION

1 Northwest Region Office takes the lead role coordinating all the of forest management
2 planning activities, including the preparation and review of this forest management plan.
3 The NDMNRF is responsible for the approval of land and resource-use decisions
4 pertaining to the forest.

5
6 The Kenora Forest is one of two management units administered from the Kenora
7 NDMNRF District Office, one of 19 management units in the NDMNRF Northwest
8 Region, and one of the 42 management units in the Province of Ontario. The location of
9 the Kenora Forest and its proximity to the NDMNRF Northwest Region is illustrated in
10 Figure 1.

11
12 **Figure 1** Location of the Kenora Forest in Northwestern Ontario
13



14
15
16 The current outer boundary of the Kenora Forest encompasses 12,252 square
17 kilometres, approximately 4 ha less than the 2012 FMP. This change in area could
18 simply be attributed to minor adjustments in the interpretation of SFL boundary area

1 during the new forest resources inventory (FRI) process and related improved data
2 quality.

3
4 Since the approval of the 2012 Forest Management Plan, there have not been any legal
5 changes to the licensed area; however refinements in the forest resources inventory
6 and the ownership classification of Kenora Forest area have resulted in some changes
7 from area reported in the 2012-2022 forest management plan.

8
9

10 **1.2 Management Responsibilities**

11
12 In 1999, the Province of Ontario awarded Trus Joist the opportunity to construct a
13 hardwood facility and to manage the Kenora Forest. In the interim, the Kenora District
14 staff of the Ministry of Natural Resources continued to be the forest manager on the
15 Kenora Forest.

16
17 In November 1999, Weyerhaeuser Company Ltd. purchased TJ International Inc.
18 thereby acquiring rights to assets of Trus Joist MacMillan Inc., including the Trus Joist
19 facility under construction and timber licence in Kenora. Weyerhaeuser Company Ltd.
20 (Trus Joist Kenora Operations) negotiated a Sustainable Forest Licence (SFL #550400)
21 and assumed responsibility for forest management activities for the Kenora Forest in
22 2002. Weyerhaeuser staff, with the assistance of a Planning Team, prepared the 2006-
23 2011 FMP and the 2011-2012 Contingency Plan. Prior to 2002, the Kenora Forest was
24 managed as a Crown Management Unit (CMU) by the Ministry of Natural Resources
25 (also formerly managed as the Aulneau and Minaki Crown Management Units).

26
27 In April 2010, Weyerhaeuser Company Ltd. transferred its Sustainable Forest License
28 (SFL) for the Kenora Forest Management Unit (FMU) to Miitigoog LP. Under the new
29 SFL, First Nations and industry shareholders have taken over the management
30 responsibilities for forestry planning and operations on the Kenora Forest.

31
32 As the holder of the SFL, Miitigoog LP is responsible for the management of the Kenora
33 Forest, and is required to carry out renewal and maintenance activities necessary to
34 provide for the long-term sustainability of the Crown forest on the Kenora Forest
35 Management Unit. To assist with the day to day delivery of these planning and
36 operational responsibilities, a First Nation owned company, Miisun Integrated Resource
37 Management Company, was formed. Weyerhaeuser continued to conduct forest
38 management activities for the Kenora Forest from April 2010 to March 2011 while
39 Miisun was formed and built up the capacity to take over forest management planning
40 and plan implementation responsibilities for the Kenora Forest. There was significant

1 overlap in personnel and information transfer between Weyerhaeuser and Miisun during
2 this period. The transfer of responsibility for forest management to Miisun occurred
3 April 1, 2011. Miisun, with support of a Planning Team, was responsible for the
4 preparation of the 2012-2022 FMP.

5
6 Miisun's responsibilities are to conduct management activities on behalf of the Miitigoog
7 LP shareholders, such as forest management planning, overlapping forest licensing
8 activities, wood allocations, road construction and maintenance, forest compliance,
9 regeneration, etc. The operating company coordinates the allocation of harvesting to
10 meet mill wood directive requirements and harvest commitments. The Plan Author, Kurt
11 Pochailo, R.P.F., works for Miisun and was supported by multi-disciplinary and multi-
12 organizational planning team members and advisors.

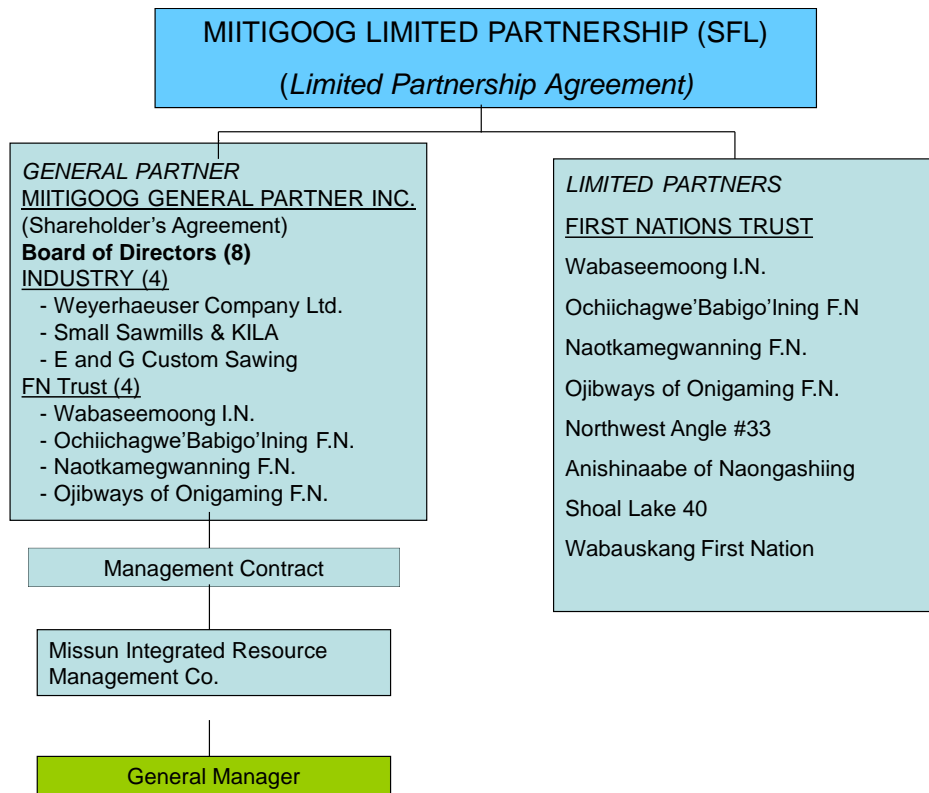
13
14 Harvesting is carried out by individual Forest Resource License holders and not by the
15 single entity SFL holder. Past harvest commitments of individual shareholders have
16 been honoured and new harvest opportunities will be managed by the SFL company
17 through a process that enhances First Nation and Métis opportunities.

18
19 Currently, the First Nation participants in this co-op SFL include Wabaseemoong
20 Independent Nations, Naotkamegwanning First Nation (Whitefish Bay), Niisaachewan
21 Anishinaabe Nation (formerly Dalles First Nation and Ochiichagwe'Babigo'Ining First
22 Nation), Ojibways of Onigaming First Nation (Onigaming), Anishnabeg of Naongashing
23 (Big Island), Northwest Angle #33, Shoal Lake #40 and Wabauskang First Nation.
24 However, other First Nations may be eligible to become a member of the limited
25 partnership under the current partnership agreement.

26
27 Figure 2 illustrates the organization of the SFL company and the relationship with the
28 forest management company.

29
30 This forest management plan (FMP) is prepared for the 10-year period from April 1,
31 2022 to March 31, 2032. The forest management plan is prepared by a multidisciplinary
32 planning team. The function of the planning team is set out in Planning Team's Terms
33 of Reference found in Supplementary Documentation M – Planning Team Terms of
34 Reference. The management plan describes forest management activities, such as
35 timber harvesting, road construction and silviculture that will take place during the plan
36 period. The strategic, long-term planning and the planning of operations are conducted
37 prior to final plan approval for the 10-year plan. This management plan includes the
38 results of strategic planning and details for specific operations for a 10-year period from
39 April 1, 2022 to March 31, 2032. This forest management plan supersedes the 2012-
40 2022 Forest Management Plan for the Kenora Forest.

1 **Figure 2 Organizational Structure of Miitigoog and Miisun**
 2



3
 4 The communities of Kenora and Dryden have received considerable volumes of wood
 5 from the Kenora Forest over the past years. The planned wood supplies off the Kenora
 6 Forest are directed towards the Weyerhaeuser TimberStrand facility in Kenora and E. &
 7 G. Custom Sawing Ltd. (Kenora). Other volumes will be sold on the open market.
 8 Volumes previously assigned to Prendiville Industries Ltd. (Kenora Forest Products,
 9 Kenora) may also be available on the open market, as the mill is shut down and has
 10 been sold and wood supply agreements and business agreements are being reviewed.
 11 The volumes delivered over the last several years can be viewed in tabular format in
 12 Section 2.2.3.

13
 14 The *Ontario Ministry of Natural Resource's Statement of Environmental Values (SEV)*,
 15 1994 under the *Environmental Bill of Rights (EBR)*, 1993 as amended from time to time
 16 is a document which describes how the purposes of the EBR are to be considered
 17 whenever decisions that might significantly affect the environment are made in the
 18 Ministry. In the development of this forest management plan, NDMNRFs Statement of
 19 Environmental Values has been considered. The plan is intended to reflect the direction
 20 set out in the SEV, and to further the objective of managing Ontario's natural resources
 21 on a sustainable basis. An SEV briefing note has been prepared by NDMNRF for the
 22 plan, and is provided in Supplementary Documentation N.

2.0 MANAGEMENT UNIT DESCRIPTION

This section of the FMP describes the forest condition, social and economic description and references the First Nation and Métis Background Information Reports for the Kenora Forest.

The central and southern portions of the Kenora Forest are relatively well-accessed, however access into the northern portion of the forest is still being developed. The Kenora Forest is accessed by the following major road systems:

1. Highway 17 through Kenora to the Manitoba border.
2. Highway 596 and 641 northwest of Kenora to Minaki.
3. White dog Caribou Falls Road (Hwy. 525) north of Minaki to the Caribou Falls Dam.
4. Highway 658 to Redditt, north of Kenora.
5. The English River Road north of Redditt to Separation Lake Narrows crossing (English River bridge).
6. Highway 71 southeast of Kenora through Sioux Narrows and Nestor Falls.
7. Maybrun Road east of Sioux Narrows.
8. Cameron Lake Road southeast of Sioux Narrows.
9. Trilake (Pipestone) Road east of Nestor Falls.
10. Highway 671 (Jones Road) northeast of Kenora.
11. Cygnet Lake Road northwest of Minaki.
12. Sand Lake Road north of Sand Lake.
13. Pickerel Lake Road northwest of Kenora.
14. Caution Lake Road northeast of Kenora.
16. South Otterskin Lake Road south of Cameron Lake.

With 16 Indigenous communities within and adjacent to its boundary, the Kenora Forest has the highest concentration of First Nations located within a management unit in the Province of Ontario. The following First Nation and Métis communities are within or adjacent to the Kenora Forest and have been identified as having interests in forest management planning:

- Métis Nation of Ontario
- Animakee Wa Zhing No. 37 (Northwest Angle No. 37 First Nation)
- Anishinaabeg of Naongashiing (Big Island)
- Asubpeeschoseewagong Netum Anishinabek (Grassy Narrows First Nation)
- Buffalo Point First Nation
- Iskatewizaagegan No. 39 Independent First Nation (Shoal Lake 39)
- Mishkosiminiziibing First Nation (Big Grassy River)

- 1 • Mitaanjigamiing First Nation
- 2 • Naotkamegwaning First Nation (Whitefish Bay)
- 3 • Northwest Angle No. 33 First Nation
- 4 • Washagamis Bay
- 5 • Niisaachewan Anishinaabe Nation (Ochiichagwe' Babigo' Ining Ojibway Nation,
- 6 Dalles)
- 7 • Ojibways of Onigaming First Nation (Sabaskong / Onigaming)
- 8 • Shoal Lake No. 40 First Nation
- 9 • Wabaseemoong Independent Nations (Whitedog)
- 10 • Wauzhusk Onigum Nation (Rat Portage)

11

12 The Kenora Forest has five Provincial Parks surrounded by, or immediately adjacent to
13 the SFL boundaries. The Provincial Parks include Woodland Caribou to the north,
14 Eagle - Dogtooth in the central portions, and Lake of the Woods, Sioux Narrows, and
15 Sable Islands in the southern portions of the unit. Scattered throughout or adjacent to
16 the Kenora Forest there are nine Conservation Reserves including Lake of the Woods
17 Conservation Reserve, Octopus Creek, Aulneau Interior, Musk Lake, Eagle-Snowshoe,
18 Lake of the Woods Waters, Big Sand Lake, Miles Bay, and Painted Rock. In addition,
19 the Aulneau Peninsula has been designated as an Enhanced Management Area (EMA).
20 More detail on the parks and protected areas is included in text Section 2.1.4.3.1.

21

22 **2.1 Forest Description**

23 **2.1.1 Historic Forest Condition**

24

25 The historical management unit information is useful in understanding trends and
26 changes in forest composition, and past use of forest resources from the management
27 unit. The observations may also allow for an adjustment to current management
28 practices that will build on those past events, or move the forest condition closer to past
29 forest conditions.

30

31 The summary of the historic forest condition of the Kenora Forest is included in
32 Supplementary Documentation A.

33

34 In order to emulate natural disturbances and landscape patterns through forestry
35 practices it is necessary to know how forest ecosystems develop without human
36 intervention, and to try to re-establish the historic natural environmental conditions.

37

1 a) **Natural Disturbances:** In the Boreal Forest, wildland fire, wind, ice and snow
2 storms and insect outbreaks are the most significant factors in shaping the future
3 forest. Fire is recognized as the principal natural disturbance initiating stands in
4 the Boreal Forest. Mapped fires in the Kenora Forest from 1960-2018 are
5 illustrated in Figure 3. Prior to modern fire suppression efforts, it is estimated
6 that on average the Kenora Forest burnt every 145 years (i.e. the total area of
7 the Kenora Forest would burn every 145 years. On the Kenora Forest, fires
8 played a significant role during the period from 1966 to 1983. Naturally disturbed
9 forest increased by 60,085 hectare during this period. There were no major
10 natural disturbances on the Kenora Forest since the 2018 inventory was
11 completed up to spring 2021. There was a small blowdown in the Shoal Lake
12 area, and in 2018 Kenora Fire 71 consumed a gross area of 10,684 ha.

13
14 In 2021, several wildfires burnt area in and adjacent to the Kenora Forest. Most
15 notably, Fire Kenora 51 (KEN51, started June 2021) burnt approx. 200,600 ha
16 from the Umfreville Lake – Werner Lake area and to the north (109,900 ha on the
17 Kenora Forest). Kenora 51 burnt most of the mature forest in the Kenora Forest
18 caribou zone. After starting in May 2021, KEN27 burnt 4,480 ha in MEA4, and
19 two other smaller fires in the Willard Lake area burnt 2,062 ha (KEN25) and
20 1,162 ha (KEN30).

21
22 b) **Humans:** Although Northwestern Ontario is sparsely populated compared to the
23 southern part of the province, its forests show the influence of more than a
24 century of industrial forestry activity and have a much longer history of
25 continuous use by Indigenous people. Humans have significantly influenced
26 forest development and condition.

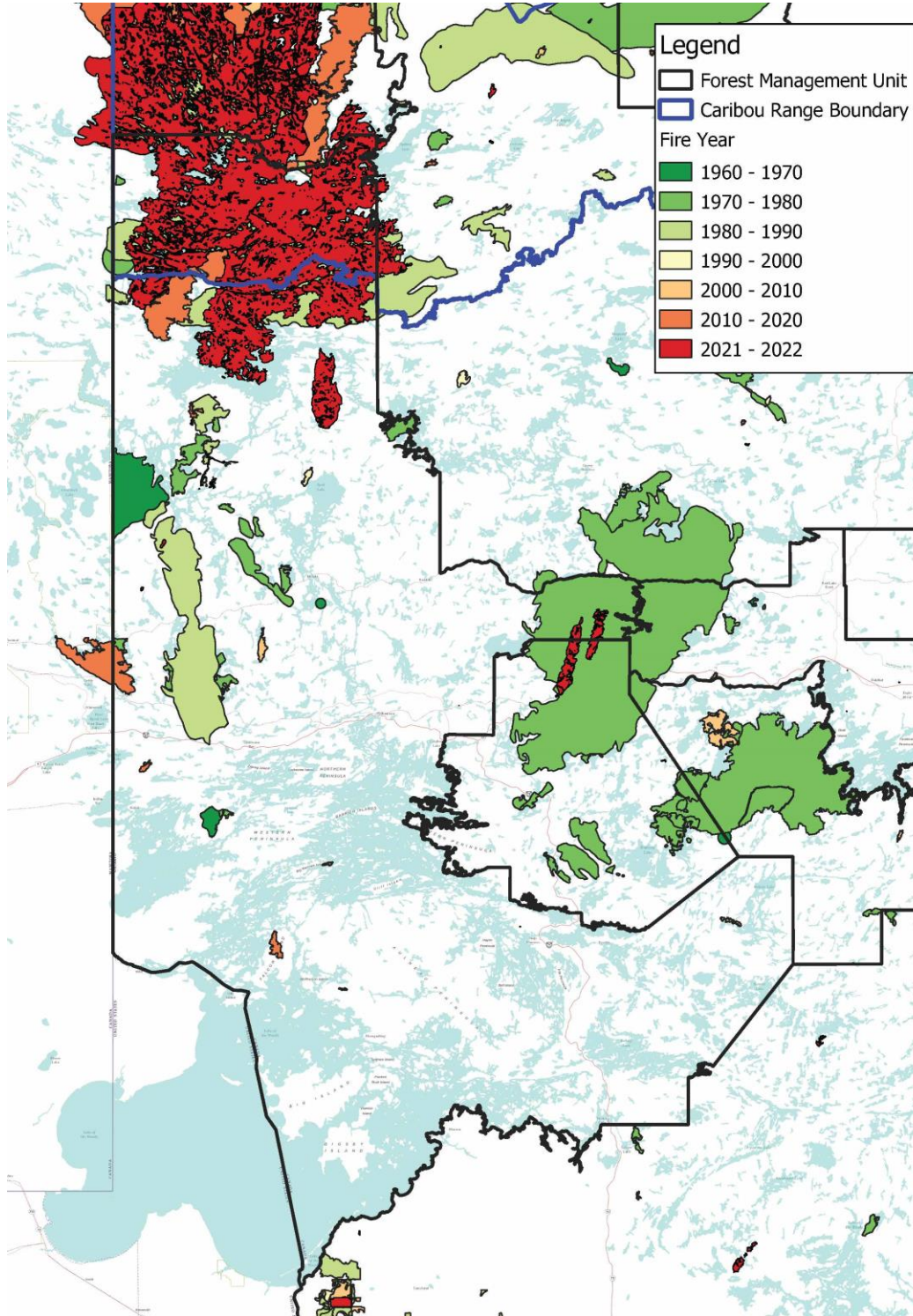
27
28 Historically, fire has caused the greatest degree of natural disturbance to the Kenora
29 Forest. Fires are responsible for the establishment of nearly all the mature forests in
30 the region, which is reflected in the predominance of Black Spruce, Jack Pine, Poplar
31 and White Birch stands. With the current fire suppression program in place in the
32 Kenora Forest, major fires generally play a lesser role in local forest dynamics today,
33 than in the past, however, the 2021 fire season was an exception (greater incidence of
34 naturally burnt area). With successful fire suppression, the overall incidence of insect
35 damage and wind/snow events may be increased.

36
37 **FINAL PLAN NOTE:** The 2021 fires referenced above occurred primarily after draft plan
38 submission. For final plan, the revised Plan Start 2022 forest inventory was estimated
39 (with burnt area estimated) and impacts of 2021 fires considered in the Comparison of

1 Planned Operations to the LTMD (Section 4.9) and Determination of Sustainability
2 (Section 5.0).

3
4
5

Figure 3 Mapped Wildfires in the Kenora Forest by Decade 1960-2021



6

2.1.2 Current Forest Condition

This section of the FMP describes the Kenora Forest Crown forested land and patent land Crown timber, as described in the planning inventory, and discusses any implications of land types on the development of this FMP.

The Management Unit Crown Land Summary is reported in Table FMP-1. This land base data is summarized from the Planning Composite Inventory (PCI), as approved by NDMNRF for use in development of this FMP. Table FMP-1 reports the area (in hectares) of different land types (forested & non-forested), by land ownership for the Kenora Forest.

- **Productive Forest** is “all forest areas which are capable of growing commercial trees, irrespective of planning decisions, and which is further sub-divided into “protection forest and production forest”.
- **Protection Forest** is “productive forest land on which forest management activities cannot normally be practiced without incurring deleterious environmental effects because of obvious physical limitations such as steep slopes and shallow soils over bedrock”.
- **Production Forest** is “productive forest land, at various stages of growth, with no obvious physical limitations on the ability to practise forest management”.

The current enhanced Forest Resource Inventory (FRI) was produced by the Ministry of Northern Development, Mines, Natural Resources and Forestry based on 2012 aerial photography and was prepared for use in the 2022-2032 FMP. The inventory has been updated with actual harvest and renewal data to 2018. Additionally forecasts for harvest were estimated to April 1, 2022 (Plan Start), therefore some variance in land classifications is possible, though is minor in scope. The description of the development of the planning inventory products can be found in Supplementary Documentation B – Analysis Package (Section 4.0).

See supplementary Table FMP-1a for a comparison of the Kenora Forest land base for the 2012-2022 and 2022-2032 forest management plans. This table illustrates the changes in land classifications, which are further described below:

Since the approval of the 2012-2022 Forest Management Plan, there have not been any legal changes to the licensed management unit area; however refinements in the forest resources inventory and the ownership classification of Kenora Forest area have resulted in some changes from area reported in the 2012-2022 forest management

1 plan. The total Kenora Forest area has decreased 405 hectares, from 1,225,576 ha in
2 2012 to 1,231,171 ha in 2022. The spatial data footprint of the Kenora Forest that was
3 provided by the NDMNRF for this FMP is very similar to that used for the previous 2012-
4 2022 FMP, however some variances in land ownership are evident between 2012-2022
5 and 2022-2032 due to the revised inventory and provincial ownership information.

6
7 The total Crown, Managed land base (ownership code 1) appeared to increase 10,050
8 hectares from 2012 to 2022. This difference is attributed to a 19,787 ha increase in
9 Crown, Managed water resulting from a 10,540 ha decrease in Other – Parks water
10 (Ownerships 5, 7) and 1,278 ha Federal land water (Ownership 6) that were reclassified
11 as OWNER=1 water, and a revision in the forest inventory and water layer (an
12 additional increase in OWNER=1 water of 7,969 ha).

13
14 Approximately 416,611 ha of the Crown, Managed land base (Ownership 1) is covered
15 by water and another 6,254 ha is other non-forested land base, a net total increase of
16 non-forested land of 16,934 ha from the 2012-2022 FMP. Approximately 51,575 ha of
17 the Crown, managed land base is non-productive forest made up of treed muskegs,
18 open muskegs, brush and bedrock (a decrease of 58,664 ha from the 2012-2022 FMP).
19 The majority of this difference is attributed to almost 55,800 ha of area classified as rock
20 in 2012, now being classified as productive forest (2022). This reclassification of
21 previous rock during the reinventory of the Kenora Forest is significant as the now
22 productive forest is planned for forest management activities from 2022-2032. The
23 planned and actual timber volumes resulting from these very shallow-soiled areas are
24 negatively impacted due to the poor growing conditions.

25
26 Protection Forest with site limitations cover 15,571 ha, also significantly decreased from
27 the 52,376 ha reported in the 2012-2022 FMP. The remaining 561,663 ha is Production
28 Forest, a significant increase of 88,585 ha from Production Forest reported in the 2012-
29 2022 FMP, a result of the reclassification of non-productive land types referenced
30 above.

31
32 Crown Other land base (Parks)(ownership codes 5, 7) within the Kenora Forest
33 decreased by 10,893 hectares from the 2012-2022 FMP (85,347 ha in 2022 versus
34 96,240 ha in the 2012-2022 FMP). The change was a result of reclassification of
35 10,540 ha of water to regular Crown, Managed land water (Ownership 1). Crown land
36 parks on and adjacent to the Kenora Forest are discussed in Section 2.1.4.3.1.

37
38 There is no Patent land with timber rights reserved to the Crown on the Kenora Forest
39 (ownership code 2). Other Patent land (Ownership 3, 4) is beyond the scope of the
40 management plan; therefore patent land is excluded from the Miitigoog SFL for the
41 Kenora Forest.

2.1.3 Forest Classification

2.1.3.1 Forest Units and Analysis Units

The Forest Management Planning Manual (FMPM) defines forest units as: “A classification system that aggregates forest stands for management purposes that will normally have similar species composition; will develop in a similar manner (both naturally and in response to silvicultural treatments); and will be managed under the same silvicultural system.”

There are three different types of forest units used in the production of and reporting for the Kenora Forest (KF) Management Plan 2022, and one set of Analysis Units used for strategic modelling:

1. Regional Standard Forest Units (SFU)(NDMNRF Northwest Region),
2. Landscape Guide Forest Units (LGFU),
3. Plan Forest Units (PLANFU), and
4. Analysis Units (AU)

The three sets of forest units are directly related to each other, and are used or combined to provide required information for strategic planning or reporting. Regional standard forest units are the foundation for all forest units and the analysis units, and may be rolled up into to landscape guide forest units or into planned forest units.

1. Regional Standard Forest Units (SFU)

The standard forest units are developed regionally to reflect the different forest conditions and management considerations found across the region and the different forest types. The regional standard forest units are based on a classification system that aggregates forest stands for management purposes, combining those that will normally have similar tree species composition, will develop in a similar manner, and will be managed under the same silviculture system. The Northwest Region is dominated by Boreal Forest with a minor portion of the Great Lakes - St. Lawrence Forest and Carolinian Forest located in the southern portions of the region. Therefore, the dominant forest types reflect conifer forest types such as Spruce, Jack Pine and Balsam Fir. Hardwood forests are dominated by Aspen, White birch and Mixedwood. The Northwest Region standard forest units cover these forest types and include some regional ecosite considerations and management considerations for upland, lowland and shallow sites.

2. Boreal Landscape Guide Forest Units (LGFU)

Landscape Guide Forest Units were based on regional standard forest units available at the time of the development of the Boreal Landscape Guide. Landscape Guide Forest Units are used to describe the current forest composition, structure and pattern at the landscape level. LGFUs that are used to describe the current forest condition are defined in NDMNRF's approved forest management guide(s) relating to landscape pattern and structure. The landscape guide forest units were the base units used for simulations of the estimated natural forest condition, which were used as the desired state for biodiversity indicators in this forest management plan. Landscape Guide forest unit groupings are considered in the indicators of management objective achievement (Table FMP-10), in the strategic modelling (LTMD, Section 3), and in reporting during and after implementation of the FMP.

3. Plan Forest Units (PLANFU) – Primary Classification for FMP

The Plan Forest Units provides the primary classification for assumptions regarding how the forest develops, through time and in response to treatment. Forest units are applied to the entire Crown forest on the management unit. Plan Forest Units are the forest unit classification used in data tables included in this forest management plan, and in required reports during and after implementation of the FMP. The Kenora Forest FMP plan forest units are described in Table FMP-2 and included in the Base Model Inventory (BMI) and Operational Planning Inventory (OPI).

The Plan Forest Units directly align with the Northwest Regional Standard Forest Unit classification, and also provide the ability to assess the requirements of the forest management guide(s) that address the conservation of biodiversity at the landscape scale (Landscape Guide Forest Units, LGFU). The relationship between the three types of forest units is illustrated in Table 1 (includes total area of Crown land Ownerships 1, 5, 7). Details on forest unit classifications are included in Supplementary Documentation B – Analysis Package, Section 5.1.3. The 11 PLANFUs match the LGFUs exactly, except that SBL PLANFU includes both the OCLow and SbLow LGFUs, and the HRD PLANFU includes the HrDom, BwDom and OthHd LGFUs. These groupings were appropriate given the relatively small areas of the OCLow, BwDom, and OthHd LGFUs on the Kenora Forest.

1
2
3

Table 1 Relationship Between Plan Forest Units and Other Forest Unit Classifications

Regional Standard Forest Units (22) (specific sort order)			Landscape Guide FU (14)			2022 Plan Forest Units PLANFU (11)		
SFU	Name	Crown, Managed Area (ha)	LGFU	Name	Crown, Managed Area (ha)	PLANFU	Crown, Managed Area (ha)	
PwDom	White Pine Dominant	9,053	PrwMx	Red Pine and White Pine Mix	20,629	PRW	20,629	3%
PrDom	Red Pine Dominant	1,608						
PrwMx	Red and White Pine Mix	9,968	ConMx	Conifer Hardwood Mix	102,990	CMX	102,990	14%
ConMx	Conifer Hardwood Mix	93,845						
UplCe	Upland Cedar	9,145	OCLow	Other Conifer Low land	10,071	SBL	49,093	7%
OCLow	Other Conifer Low land	10,071						
SbLow	Black Spruce Low land	39,022	SbLow	Black Spruce Low land	39,022	SBD	21,653	3%
SbSha	Black Spruce Shallow	6,355						
SbDee	Black Spruce Deep	15,298	PjDom	Jack Pine Dominant	154,109	PJD	154,109	21%
PjSha	Jack Pine Shallow	66,174						
PjDee	Jack Pine Deep	87,935	PoDom	Poplar Dominant	65,068	POD	65,068	9%
PoSha	Poplar Shallow	1,011						
PoDee	Poplar Deep	64,057	SbMx1	Black Spruce Dominant Conifer Mix	31,516	SBM	31,516	4%
SbMx1	Black Spruce Dominant Conifer Mix	31,516						
PjMx1	Jack Pine Dominant Conifer Mix	42,091	PjMx1	Jack Pine Dominant Conifer Mix	42,091	PJM	42,091	6%
BfPur	Balsam Fir Pure	2,456						
BfMx1	Balsam Fir Conifer Mix	36,159	BfDom	Balsam Fir Dominant	38,615	BFD	38,615	5%
BwSha	Birch Shallow	191						
BwDee	Birch Deep	3,730	BwDom	Birch Dominant	3,921	HRD	107,552	15%
OthHd	Other Hardwood	22,751						
HrDom	Hardwood Dominant	80,880	HrDom	Hardwood Dominant	80,880	HMX	85,766	12%
HrdMw	Hardwood Mix	85,766						
		719,082			719,082	red matches LGFU	719,082	100%

4
5



4. Analysis Units (AU)

The 11 Plan Forest Units were divided, where appropriate, into Analysis Units (AU)(17 in total) for strategic modelling and analysis purposes. Analysis units refine or subdivide forest units to more accurately project forest development and biological considerations such as site limitations or site richness, and differing responses in post-disturbance or successional pathways. Analysis Units are described in detail in Section 6.1.1 of Supplementary Documentation B – Analysis Package, including their direct relationship to plan forest units, to regional standard forest units, through to the landscape guide forest units. Analysis Units are included in the Base Model Inventory. The Analysis Package also contains details associated with how forest units and analysis units have been applied and are being used to support management decisions.

Table 2 Relationship of Analysis Units to Plan Forest Units

Kenora Forest 2022 FMP PLANFUs:			Kenora Forest 2022 Analysis Units (AUs):		
1	BFM	Balsam Fir Mix	1	BFM_	(same as PLANFU / SFU sort)
2	CMX	Conifer Mix	2	CMX_	ConMx component
			3	CMXC	Upland Cedar component
3	HMX	Hardwood Mix	4	HMX_	(same as PLANFU)
4	HRD	Hardwood Dominant	5	HRDA	OthHd component (Ash)
			6	HRDB	Birch component
			7	HRD_	Hardwood Dom component
5	PJD	Jack Pine Dominant	8	PJDD	Jack Pine deep
			9	PJDS	Jack Pine shallow
6	PJM	Jack Pine Mix	10	PJM_	(same as PLANFU)
7	POD	Poplar Dominant	11	POD_	(same as PLANFU)
8	PRW	Red Pine and White Pine Mix	12	PRWR	Red Pine component
			13	PRWW	White Pine component
9	SBD	Spruce Dominant	14	SBD_	(same as PLANFU)
10	SBL	Spruce Lowland	15	SBL_	Lowland Spruce component
			16	SBLC	Lowland Cedar component
11	SBM	Spruce Mix	17	SBM_	(same as PLANFU)

1 Managed, Crown Forest

2 A summary of managed, Crown productive forest (Ownership 1) by plan forest unit is
3 summarized in Table FMP-3, by 20-year age class (source data BMI).

4
5 There are 577,234 ha of managed, Crown productive land base on the Kenora Forest,
6 which includes of 503,771 ha available for timber production. The remainder is
7 comprised of unavailable forest area (57,892 ha, estimated to be unavailable for
8 strategic modelling) due to management decisions like management reserves and small
9 or inaccessible areas, and Protection Forest (15,571 ha, classified as unavailable in the
10 BMI) where site limitations exist. These areas are considered part of the unavailable
11 land base for strategic modelling.

12
13 The available area is the portion of the Crown managed land considered available for
14 operational planning and implementation of forest management activities. The
15 unavailable land area is generally not considered part of the area available for timber
16 extraction or operational planning and this area includes area currently considered
17 inaccessible (islands, inoperable areas peninsulas, etc.), protected areas (including
18 known AOC reserves), or areas related to other management decisions.

19
20 The areas reported for Table FMP-3 match the Crown, Managed forest areas reported in
21 Table FMP-1. The processes used to build and update the Base Model Inventory, used
22 for FMP-1 and 3, are recorded in Supplementary Documentation B - Analysis Package,
23 Section 6.1. Table 3 provides a summary from Table FMP-3 showing the Plan Forest
24 Unit break down into the categories of available or unavailable land base for timber
25 production (Ownership 1).

26
27 **Table 3 Summary of Available and Unavailable Plan Forest Unit Area from**
28 **FMP-3**

Forest Unit	Unavailable	Available	% of Available
BFM	4,790	25,681	5%
CMX	10,946	71,963	14%
HMX	8,397	53,945	11%
HRD	7,845	58,246	12%
PJD	16,901	126,980	25%
PJM	4,450	32,211	6%
POD	3,754	48,318	10%
PRW	2,804	11,303	2%
SBD	1,486	18,399	4%
SBL	9,385	31,731	6%
SBM	2,705	24,994	5%
TOTAL	73,463	503,771	100%

29

1 Table FMP-3 displays that approximately 13% of the Crown, Managed Production land
2 base (Ownership 1) is projected to be unavailable for operational management
3 (Protection Forest and estimated reserve area). This area does contribute to the
4 evaluation of general landscape pattern in the Boreal Landscape Guide (BLG) and its
5 associated objective achievement. The Kenora Forest is fairly evenly split between
6 conifer-dominated forest and hardwood-mix forest. BLG indicator achievement will be a
7 significant influence on the setting of management objectives, therefore having a good
8 mix of forest types should allow management in this plan period move the Kenora Forest
9 towards toward desirable levels. Table FMP-3 shows that the majority of the available
10 forest is in the 81-100 year old age class. These forest stands are at a prime age for
11 timber production, which will have to be balanced with the benefits projected for retaining
12 some areas (preferably unavailable forest, but possibly some available forest) for other
13 benefits such as provision of old growth or mature-old forest types. Development of the
14 LTMD will consider the balance of short-term and long-term objective achievement for
15 both forest diversity and socio-economic objectives.

16

2.1.3.2 Forest Landscape Classes

Forest landscape classes are used to describe the current forest composition, structure and pattern at the landscape level. Landscape classes that are used to describe the current forest condition are defined in the *Forest Management Guide for Boreal Landscapes* (MNR, 2014). Landscape classes are groupings of forest units by development stage that are meaningful to how forests function as habitat for wildlife.

Ontario's Landscape Tool (OLT) was used to analyze the current forest condition (Plan Start 2022) and calculate area by forest landscape classes.

2.1.3.2.1 Landscape Structure and Composition:

There are five (5) indicators described in the BLG under Structure and Composition that provides management direction for the Kenora Forest. The BLG places focus on (a) landscape classes, (b) old growth, (c) red pine and white pine forest, (d) upland pine and spruce forest, and (e) young forest.

(a) Landscape Classes:

The BLG provides specific direction for management and improvement of the older four classes:

1. Mature and Late Balsam Fir,
2. Mature and Late Lowland Spruce and Low Other Conifer,
3. Mature and Late Conifer and Conifer Mixedwood, and
4. Mature and Late Hardwood and Hardwood Mixedwood.

Figure 4 is a Box and Whisker report for landscape class indicators generated using Ontario's Landscape Tool (OLT, 2020). The boxes are the inter-quartile ranges (IQR) that illustrate the results from the middle 50% of results (i.e. 25% to 75% of results). The whiskers above and below the box extend to include the upper 25% and lower 25% of results, and are considered the outer limits of the Simulated Range of Natural Variation (SRNV).

The Boreal Landscape Guide (p. 26, and Page 66 Table A1) identifies the middle 50% of the SRNV (the "inter-quartile range") as the appropriate desirable level for area-based indicators in an FMP (e.g., area of young forest, area of old growth, etc.). The 2022 Plan Start level for these area-based landscape classes are discussed in the following paragraphs.

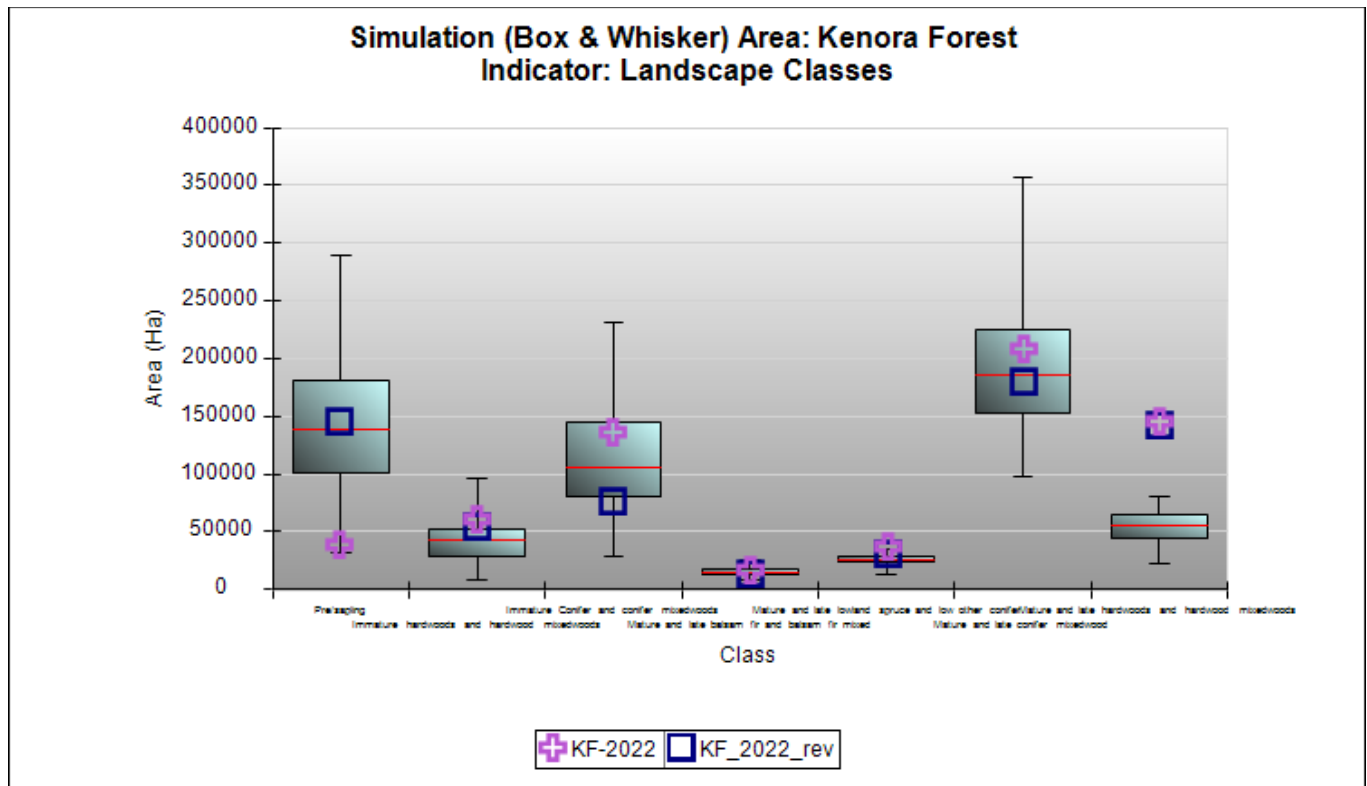
Figure 4 shows achievement of landscape class area at 2022 Plan Start, in relation to the SRNV for the Kenora Forest (OLT scenario KF-2022). The IQRs for the Mature-Late

1 (ML) classes were used as the indicator desirable levels. ML Upland Conifer is within
2 the IQR at Plan Start 2022. The other three ML classes have areas above the upper
3 IQR level.

4
5 Direction from the Boreal Landscape Guide is to have the indicator levels for each of
6 these classes within the IQR's. These starting points (illustrated by pink squares)
7 illustrated in Figure 4 provide guidance on the direction forest management activities
8 should implement to start moving towards (decreasing) or maintaining the landscape
9 classes within the IQR's for each landscape class.

10
11 **FINAL PLAN NOTE:** For Final Plan, Figure 4 was updated with the revised estimate of
12 Landscape Achievement at Plan Start 2022, considering 2021 wildfires and revised
13 forecast depletions. This figure shows the change in Landscape class area from the
14 LTMD/Draft Plan land base (KF-2022, pink crosses) and that revised for the final plan
15 (KF_2022_rev, blue squares). All areas of mature-late landscape classes have slightly
16 decreased from the previous estimates as a result of wildfires.

17
18 **Figure 4 Landscape Class Indicator Achievement for 2022 Plan Start**
19

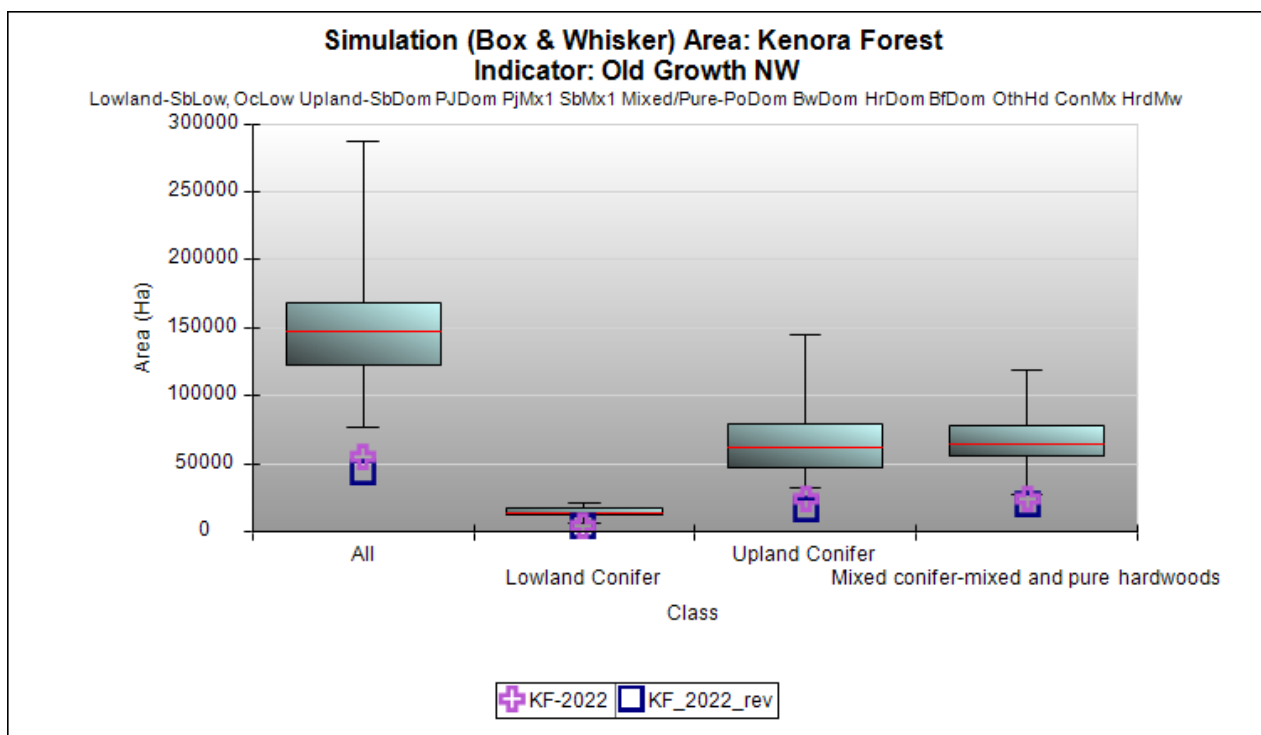


20

1 (b) Old Growth:
 2 The BLG set direction for old growth (OG) indicators where targets are to be managed
 3 by forest units or appropriate Old Growth grouping. For the Kenora Forest, the four
 4 NDMNRF NWR Old Growth groupings were adopted to quantify the forest condition at
 5 Plan 2022 Start (Lowland Conifer, Upland Conifer, Mixed Conifer – Mixed and Pure
 6 Hardwood, and Red Pine-White Pine). A summary of Old Growth area at 2022 Plan
 7 Start can be seen in Figure 5 (with the pink crosses)(Note: OLT does not include Red
 8 Pine-White Pine Old Growth). Old Growth Upland Conifer, OG Mixedwoods and
 9 Hardwood, and OG Lowland Conifer are all below their IQRs at 2022 Plan Start. LTMD
 10 development will consider that within this 10-year plan period, old growth areas should
 11 increase towards the IQRs. OG Red Pine-White Pine does not have an IQR in OLT, but
 12 has a desirable level from the BLG to move towards as applicable (to increase area)
 13 (1,969 ha at Plan Start which is above the 1995 level of 97 ha).

14
 15
 16

Figure 5 Old Growth Indicator Achievement for 2022 Plan Start



17
 18
 19
 20
 21
 22
 23
 24

FINAL PLAN NOTE: For Final Plan, Figure 5 was updated with the revised estimate of Old Growth Area at Plan Start 2022, considering 2021 wildfires and revised forecast depletions (blue boxes). This figure shows the change in Old Growth area from the LTMD/Draft Plan land base (pink crosses) and that revised for the final plan (blue squares). All areas of Old Growth have decreased from the previous estimate as a

1 result of the wildfires. The revised 2022 estimate of Red Pine-White Pine Old Growth
2 decreased from 1,969 to 1,928 ha.

3

4

5 (c) Red Pine and White Pine Forest:

6 The BLG set direction for a red pine and white pine (all ages) forest indicator. The
7 direction contains two statements, increase towards pre-industrial condition (estimated
8 to be 6% of the forested land base for Ecoregion 4S, 95% of the Kenora Forest, equals
9 39,135 ha) and do not drop below the 1995 levels. With 18,488 ha at 2022 Plan Start,
10 currently the Kenora Forest is above the 1995 level that was 10,220 ha., and planning
11 efforts have been focused on increasing the area that contributes towards the goal
12 (PRW forest unit). Planning efforts in this plan will be to continue to move towards the
13 estimated pre-industrial condition and to not fall below the 1995 level. Red pine and
14 white pine simulation is not available in OLT due to BFOLDS not being able to simulate
15 ground fires, as such, a desired level to increase red pine – white pine area on the
16 Kenora Forest will be implemented for this plan.

17

18 **FINAL PLAN NOTE:** For Final Plan, the area of Red Pine – White Pine Forest at Plan
19 Start 2022, was revised considering 2021 wildfires and revised forecast depletions. The
20 revised estimate is 18,847 ha (same) as a result of a small amount of PRW area
21 naturally burnt offset by the revised forecast depletions (slightly less than was
22 previously forecast).

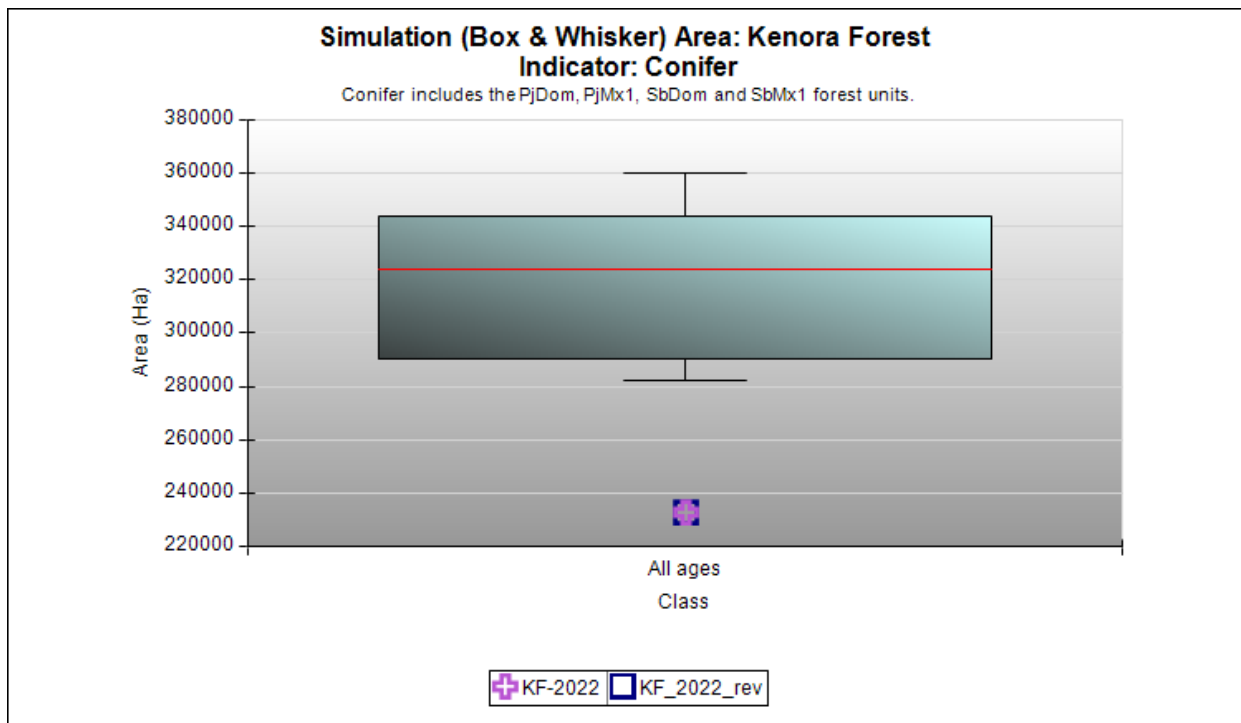
23

1 (d) Upland Pine and Spruce Forest:

2 The BLG set direction for an upland pine and spruce indicator (referred to as “Conifer”
 3 in OLT) that considers all ages of conifer (defined as PJMX1, PJDOM, SBDOM and
 4 SBMX1 LGFU’s). Figure 6 (pink crosses) shows that the conifer indicator is currently
 5 below the SRNV so planning efforts will be guided to create more conifer in the four
 6 LGFU’s that contribute to this upland conifer indicator.

7
 8 **FINAL PLAN NOTE:** For Final Plan, Figure 6 was updated with the revised estimate of
 9 Upland Pine and Spruce Forest at Plan Start 2022, considering 2021 wildfires and
 10 revised forecast depletions (blue boxes). This figure shows the Upland Pine and
 11 Spruce area from the LTMD/Draft Plan land base (pink crosses) and the revised for the
 12 final plan (blue squares) are almost the same. The revised estimate of 2022 Upland
 13 Pine and Spruce Forest has decreased 340 ha from the previous estimate as a result of
 14 the revised forecast depletions prior to Plan Start 2022.

15
 16 **Figure 6 Upland Conifer Indicator Achievement for 2022 Plan Start**

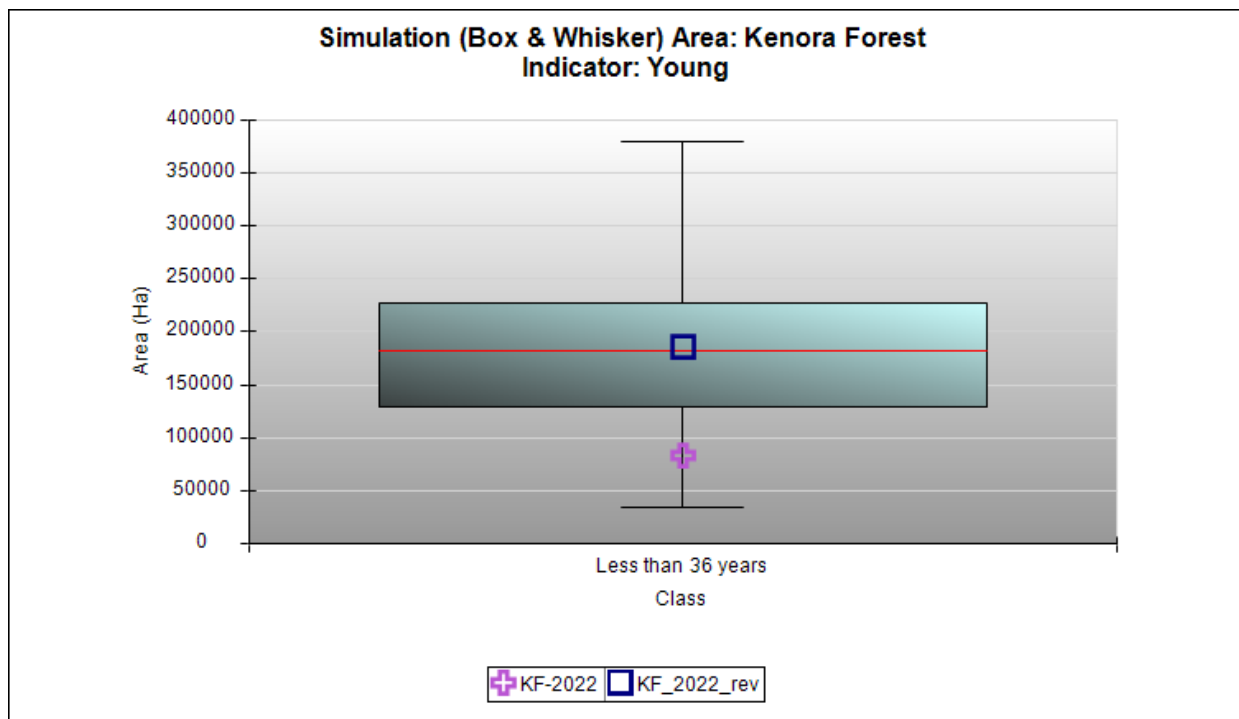


18

1 (e) Young Forest:
 2 The BLG direction for a young forest indicator includes all forested area less than 36
 3 years old. Figure 7 shows the plan start level is below the IQR for the young forest
 4 indicator. Increasing and then maintaining this indicator within the IQR will be a
 5 management consideration while balancing competing direction involved in managing
 6 towards some of the other landscape indicators.

7
 8 **FINAL PLAN NOTE:** For Final Plan, Figure 7 was updated with the revised estimate of
 9 Young Forest Area at Plan Start 2022, considering 2021 wildfires and revised forecast
 10 depletions. This figure shows the change in Young Forest from the LTMD/Draft Plan
 11 land base (pink crosses) and the revised estimate for the final plan (blue squares).
 12 Young Forest has increased significantly from the previous estimates as a result of the
 13 2021 wildfires, to within the IQR for Young Forest.

14
 15 **Figure 7 Young Forest Indicator Achievement for 2022 Plan Start**



17
 18

1 2.1.3.2.2 Landscape Pattern

2 The BLG set two general landscape pattern indicators for the entire Kenora Forest; a)
3 texture of mature and old forest, and b) young forest patch size.

4
5 a) Texture of Mature and Old Forest:

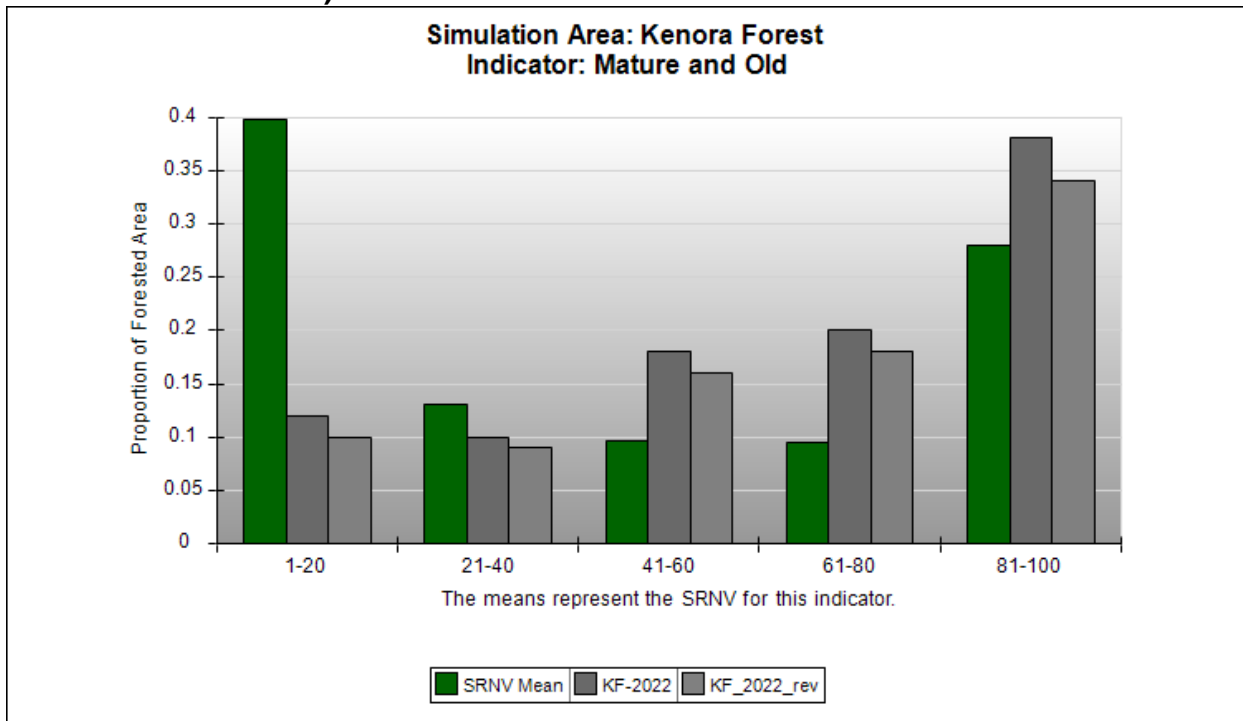
6 Texture refers to the percent concentration (or “patchiness”) of mature and old forest
7 found within each hexagon and not the amount of ‘old growth’ on the Kenora Forest.
8 The texture of mature and old forest pattern is evaluated at two scales using Ontario’s
9 Landscape Tool, specifically at 500 ha and 5,000 ha hexagon scales. The 500 ha scale
10 is shown in Figure 8 and Figure 10 (map), and the 5,000 ha hexagon distribution is
11 shown in Figure 9 and Figure 11 (map) for 2022 Plan Start.

12
13 **FINAL PLAN NOTE:** For Final Plan, Figure 8 and Figure 9 were updated with the
14 revised estimate of Landscape Pattern achievement at Plan Start 2022, considering
15 2021 wildfires and revised forecast depletions. These figures show the change in
16 Mature and Old Forest Pattern from the LTMD/Draft Plan land base (KF-2022) and that
17 revised for the final plan (KF_2022_rev).

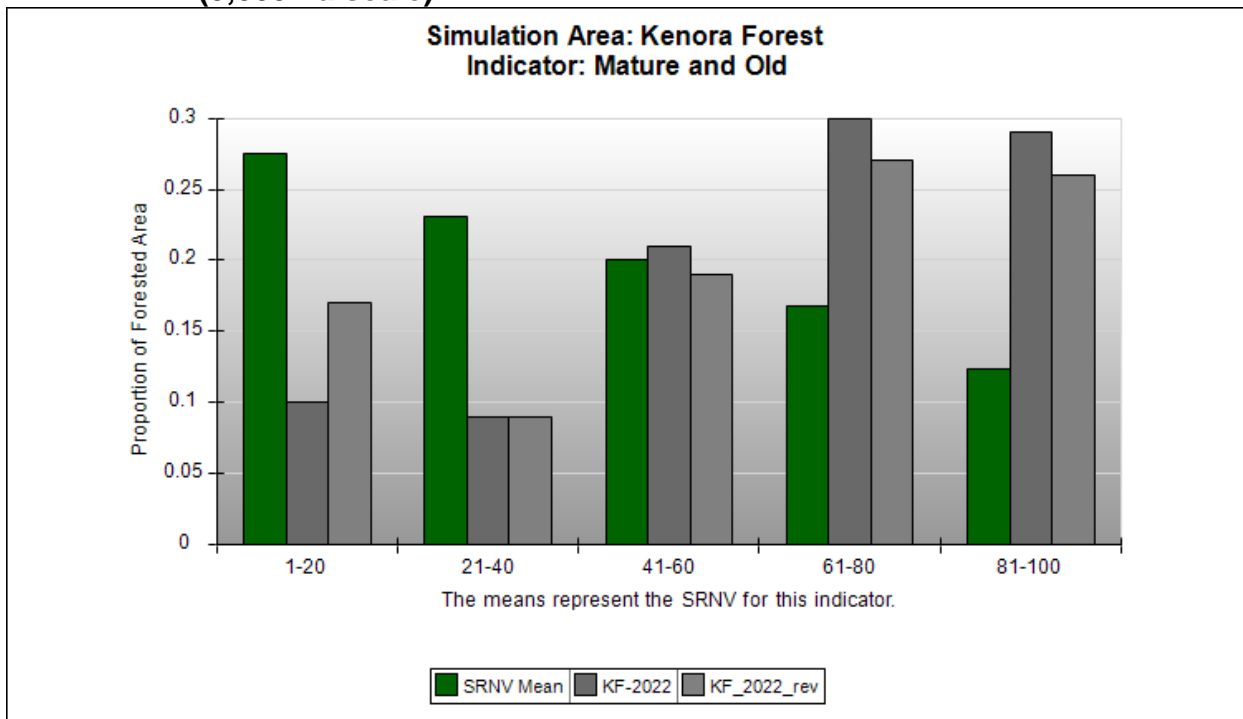
18
19 At both scales, the texture of mature and older forest are very dense (very good for this
20 indicator), however it should be noted that the amount of mature and old forest
21 decreased in the revised forest inventory due to the significant area burnt in 2021
22 (decrease of approx. 39,000 ha). Management efforts will be to maintain the SRNV
23 means for both the 500 and 5,000 ha scales with the focus of the texture of mature and
24 old forest in > .60 proportion classes.

25

1 **Figure 8 Mature and Old Texture Indicator Achievement – 2022 Plan Start (500**
2 **ha scale)**



3
4
5 **Figure 9 Mature and Old Texture Indicator Achievement – 2022 Plan Start**
6 **(5,000 ha scale)**



7

1 **Figure 10 Landscape Pattern Texture of Mature and Old (500 ha scale)**

2
3 (Left: LTMD Map)

(Right: Post 2021-Fires Map)

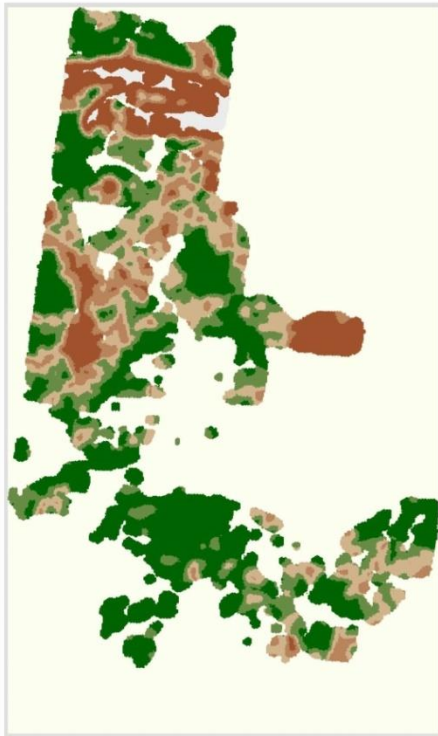
4
5

0.8 KF-2022 2022

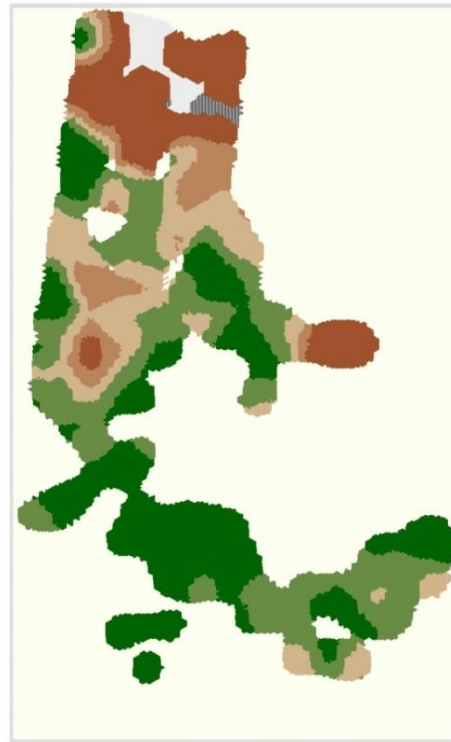
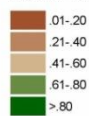
0.8 KF-2022_rev 2022

Proportion of Mature and Old Forest (500 ha)

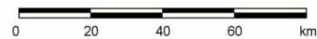
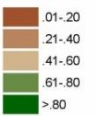
Proportion of Mature and Old Forest (5000 ha)



Mean Proportion



Mean Proportion



6 The right-hand map clearly shows the loss of a large area of mature and old forest in
7 the upper (northern) portion of the Kenora Forest, resulting from Fire KEN51 in 2021.

8

1 **Figure 11 Landscape Pattern Texture of Mature and Old (5,000 ha scale)**

2
3 (Left: LTMD Map)

(Right: Post 2021-Fires Map)

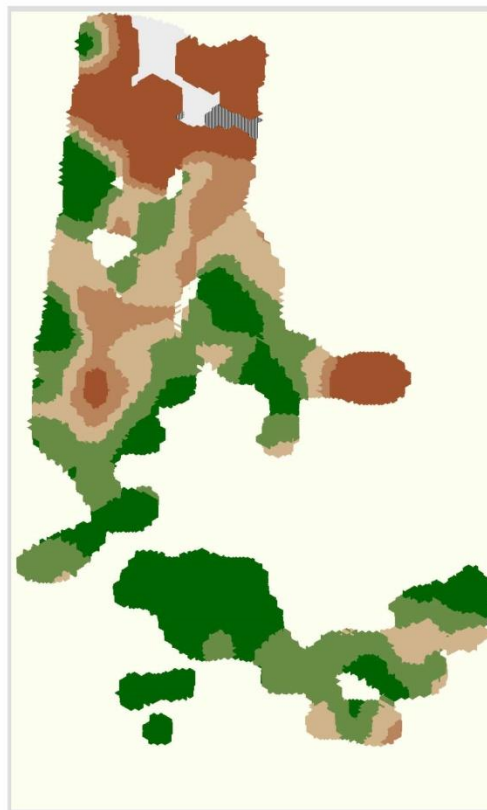
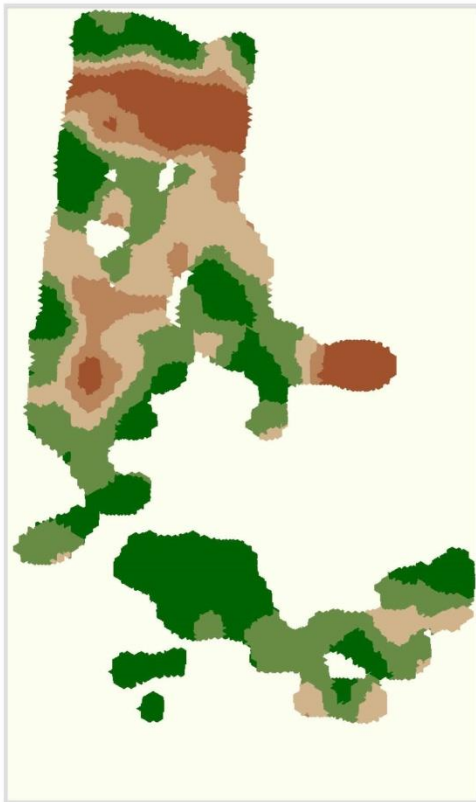
4

0.8 KF-2022 2022

5 0.8 KF_2022_rev 2022

Proportion of Mature and Old Forest (5000 ha)

Proportion of Mature and Old Forest (5000 ha)



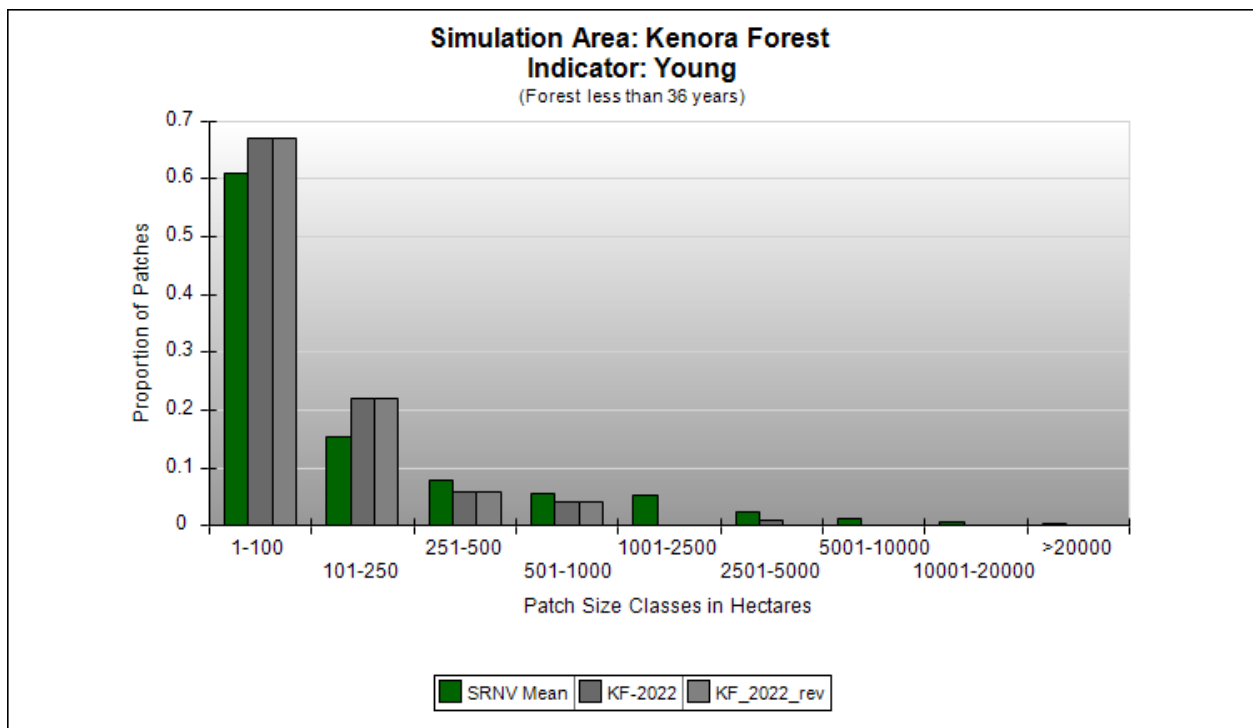
1 b) Young Forest Patch Size:
 2 Young forest is evaluated by a young forest patch size frequency distribution using OLT.
 3 Figure 12 shows the report generated for Plan Start 2022, and Figure 13 (map) shows
 4 the geographic distribution of young forest by patch size. Overall, the frequency
 5 distribution of young forest patches by size class is similar to that estimated for the
 6 natural condition, but with slightly more, smaller patches of young forest <250 ha as
 7 compared to the natural condition. If the overabundance of small, young forest patches
 8 continues for several decades without coalescing small cuts into bigger cuts (patches),
 9 the forest will be difficult to recover to the desired levels, and eventually the texture of
 10 the mature and old will become less dense and move away from its desirable level
 11 (mean of SRNV). In general, management trends may be explored to lower frequency
 12 of patches <250 ha by possibly producing some larger patch sizes in the young forest
 13 disturbance patches, or consolidating harvest patches adjacent to existing young forest.

14
 15 **FINAL PLAN NOTE:** For Final Plan, Figure 12 was updated with the revised estimate
 16 of Young Forest Patch Frequency at Plan Start 2022, considering 2021 wildfires and
 17 revised forecast depletions. This figure shows the change in Young Forest Pattern from
 18 the LTMD/Draft Plan land base (KF-2022) and that revised for the final plan
 19 (KF_2022_rev).

20

21 **Figure 12 Young Forest Frequency by Size Class Indicator for 2022 Plan Start**

22



23

24

1 This analysis is frequency (number) of young forest patches by size class, not the area
 2 of young forest. While the area of young forest increased significantly between the
 3 original estimate and the revised land base, the patch frequency by size class did not
 4 change significantly. A noticeable change is that the revised land base now includes
 5 some occurrences of young forest in the very large size classes, from >1,000 ha to over
 6 20,000 ha as a result of the 2021 wildfires.

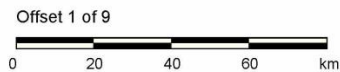
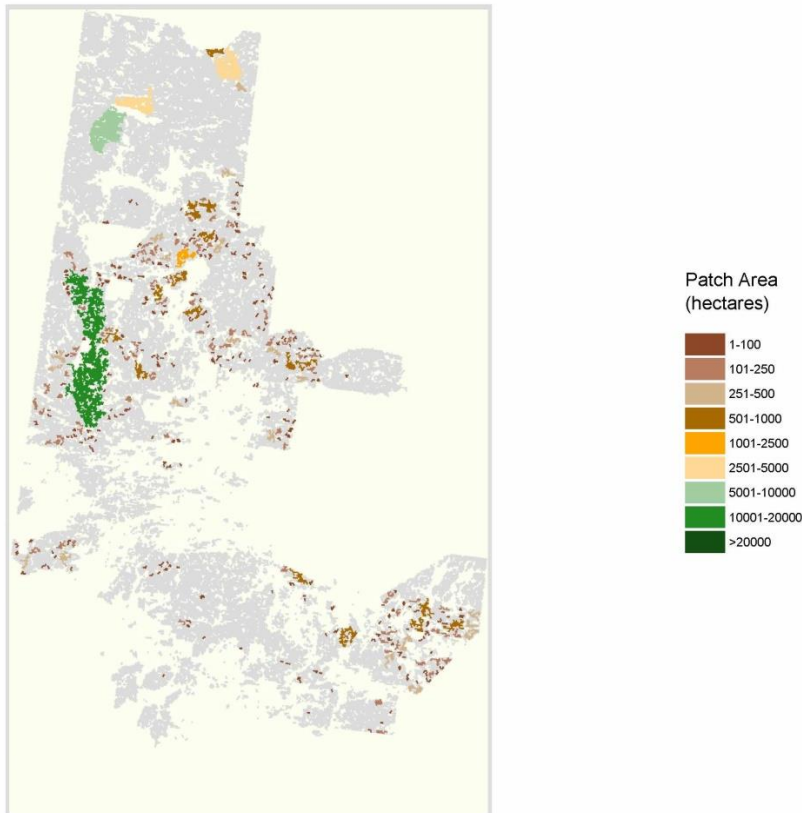
7
 8 A landscape pattern map for the current 2022 forest condition is included in the FMP as
 9 a digital map file: MU644_2022_FMP_Map_LandPat_01.pdf.

10
 11 **Figure 13 Size Distribution of Young Forest Patches at 2022 Plan Start**

12
 13 (Top: LTMD Young Forest Map)

15.2 KF-2022 2022

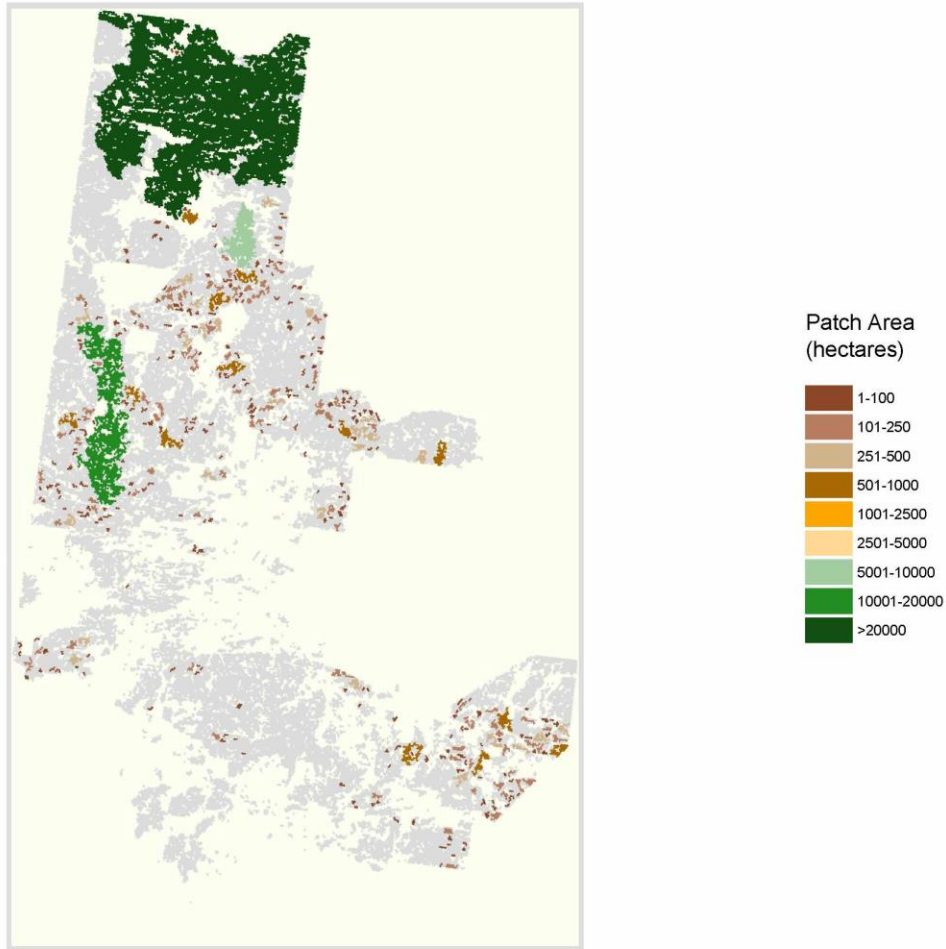
Size Distribution of Young Forest Patches



1 (Bottom: Post 2021-Fires Young Forest Map)
2

15.2 KF_2022_rev 2022

Size Distribution of Young Forest Patches



3
4
5
6

The map clearly shows the new, extremely large area of young forest in the upper (northern) portion of the Kenora Forest, resulting from Fire KEN51 in 2021.

2.1.3.2.3 Implications of Current Landscape Condition on the FMP

During development of the *Forest Management Guide for Boreal Landscapes* (Boreal Landscape Guide), NDMNRF consulted available historical data on the size, frequency, and intensity of fires on Crown land in the province in an effort to determine what a "natural" landscape would look like. Historical data are limited in the kind of information available, however. Therefore, NDMNRF developed a simulation model (the "Boreal Forest Landscape Dynamics Simulator or "BFOLDS") to "burn" the landscape guide region in which the Kenora Forest is situated according to a fire disturbance regime that would be natural for the region (ecoregion 3S/4S). This model recognized that a wide variety of influences determines the frequency with which fires burn, how large a fire can grow, how intensely the fire burns, and the outcome of the fire (the species composition of the new stand). There is no single "right answer" for the results of a natural disturbance regime when all these factors are taken into account, because factors related to the cause and rate of spread can interact, some forest types are more likely to burn than others, and variation in seed crops may result in dense regeneration to conifer in some cases but greater representation by hardwoods in other cases. Also, there are elements of randomness in where lightning strikes. By repeatedly burning the forest in the model over a 200 year period while allowing the computer to select at random from tables of actual historical values for lightning strikes, patch sizes, and other attributes, NDMNRF was able to identify a "simulated range of natural variation" (SRNV) for the landscape attributes of interest, such as the supply of young forest, the supply of old growth, the supply of conifer forest, and others.

The Boreal Landscape Guide (p. 26 and Table A1) identifies the middle 50% of the SRNV (the "inter-quartile range") as the appropriate desirable level for area-based indicators in an FMP (e.g., area of young forest, area of old growth), and the mean (average) of the SRNV as the appropriate desirable level for pattern based indicators (e.g., texture or "patchiness" of the mature and old forest). The Boreal Landscape Guide provides milestones (Table A1 for the Kenora Forest) that indicate what the FMP should strive to do to ensure that the forest remains in or moves toward a natural condition that falls within the ranges identified by NDMNRF as acceptable. Table 4 below is a summary of the BLG milestones.

1 **Table 4 Milestones for Forest Composition, Structure, and Pattern for the**
 2 **Kenora Forest from the Boreal Landscape Guide**

<i>CFSA Objective Category</i>	<i>Landscape Guide Indicator Group</i>	<i>Landscape Guide Indicator</i>	<i>Directional Milestone for this FMP Period</i>
Forest Structure & Composition	Landscape Class Area	Mature and older balsam fir mixed	Decrease and maintain within the IQR
		Mature and older lowland spruce and low other conifer	Decrease and maintain within the IQR
		Mature and older conifer and conifer mixedwood	Maintain within the IQR
		Mature and older hardwood and hardwood mixedwood	Decrease
	Old Growth Forest Area	Old Growth Lowland Conifer	Increase
		Old Growth Upland Conifer	Increase and maintain within the IQR
		Old Growth conifer-mixed and pure hardwood	Increase and maintain within the IQR
		Old Growth Red Pine – White Pine	Increase
	Red Pine and White Pine Forest Area	All age classes of red pine and white pine	Increase
	Upland Pine and Spruce Forest	All ages of conifer	Increase
Young Forest Area	All forest units combined	Increase (maintain as a result of Fire KEN51)	
Pattern	Texture of Mature and Old Forest	Texture of mature and older forest (500 and 5,000 ha hexagon frequency distribution)	Move towards mean of the SRNV, with a focus on the two concentration classes >60%.
	Young Forest Patch Size (less than 36 years)	Young forest patch size	Move towards mean of the SRNV
Habitat	Caribou Habitat (in caribou zone)	Refuge Habitat	Maintain within the IQR (Move towards)
		Winter Combined Habitat	Maintain within the IQR (Move towards)
		Texture/arrangement of refuge habitat (6,000 and 30,000 ha hexagon frequency distribution)	Move towards mean of the SRNV, with a focus on the two concentration classes >60%.
		Texture/arrangement of winter habitat (6,000 and 30,000 ha hexagon frequency distribution)	Move towards mean of the SRNV, with a focus on the two concentration classes >60%.

3

- 1 All of these milestones and the 2022 Plan Start amount or texture of each indicator were
- 2 taken into account by the planning team during development of the FMP objectives
- 3 (Table FMP-10), and in planning the layout of harvested and unharvested blocks.
- 4 NDMNRF's Ontario's Landscape Tool was used to calculate progress toward meeting
- 5 these desirable levels during development of the FMP.

2.1.3.3 Other Forest Classifications

Other forest classifications to describe the current forest condition based on forest cover were adopted by the Planning Team for consideration and management during development of this FMP.

General habitat classification is discussed in subsections 2.1.3.3.1 to 2.1.3.3.3.

Habitat for all wildlife species that inhabit the Kenora Forest are considered through the management of forest composition, age structure and landscape pattern required by management indicators in accordance with the *Forest Management Guide for Boreal Landscapes* (BLG).

Forest-related Species at Risk are discussed in Forest Resources, Section 2.1.4.1 – Inventories and Information for Species at Risk.

2.1.3.3.1 Background on Habitat Conservation and Habitat Classification

Since 1994, the Crown Forest Sustainability Act (S.O. 1994) has required forest managers to conserve biological diversity during forest management planning and implementation. NDMNRF has recognized that there are hundreds of species of vertebrates (mammals, birds, reptiles, amphibians), many thousands of species of invertebrates (insects, spiders, mites and others), and hundreds of species of plants and fungi in the boreal forest region where the Kenora Forest is situated. It would be impossible to provide for them all using species-specific approaches, particularly since different wildlife species have very different needs. For example, marten prefer large patches of mature and older forest, but moose prefer patches of young forest containing abundant browse interspersed with mature forest stands for cover; ruffed grouse prefer mixedwood and deciduous forest, while spruce grouse prefer pure coniferous forest. There are many other cases where the needs of wildlife are in conflict with each other. To address this, NDMNRF developed a "coarse filter-fine filter" habitat management strategy to direct managers to produce landscapes that are as natural as possible with respect to composition and pattern (the coarse filter), and to protect certain representative or sensitive species and sites (the fine filter). This strategy was described by OMNR (2001) in the "*Forest Management Guide for Natural Disturbance Pattern Emulation*", which represented the "coarse filter". The "fine filter" focused on direction from manuals and FMP training related to protecting water quality and fish habitat, providing habitat for moose, marten, deer, caribou, a variety of songbirds, stick-nesting birds such as herons, eagles, ospreys, and hawks, grouse, species preferring

1 old growth, and others. This direction was applied in previous FMPs for the Kenora
2 Forest.

3

4 Prior to the development of the 2022-2032 FMP for the Kenora Forest, NDMNRF
5 undertook a major review and revision of their coarse-filter fine filter direction to ensure
6 that the direction for forest management has a strong scientific basis, is up to date, and
7 minimizes redundancy to the extent possible. NDMNRF reviewed a large body of
8 scientific literature and recent and historical databases, developed and tested natural
9 disturbance simulation models, consulted with the public, experts, and Indigenous
10 people, and consolidated their revised direction into two key science-based forest
11 management guides that together describe the coarse filter-fine filter approach forest
12 managers must take to conserve biological diversity in the boreal forest:

- 13 • *Forest Management Guide for Boreal Landscapes (MNRF 2014)*, and
- 14 • *Forest Management Guide for Conserving Biodiversity at the Stand and*
15 *Site Scales (MNRF 2010)* (Stand and Site Guide).

16

17 These guides (see NDMNRF's web site with links to forest management guides:
18 <https://www.ontario.ca/page/forest-management-guides>) direct forest managers to
19 emulate the natural composition, pattern, and structure of a landscape that would
20 develop in the area under a natural disturbance regime dominated by wild fire. The
21 guides also require managers to protect fish habitat, to protect existing nests, dens, and
22 spawning areas, and to address the larger habitat needs of a reduced list of featured
23 species (e.g., caribou habitat through a dynamic caribou habitat schedule for forests
24 that are within caribou range). The approach taken must also be consistent with
25 requirements of the provincial Endangered Species Act (S.O. 2007) as well. The
26 direction in the Boreal Landscape Guide, the Stand and Site Guide, and the
27 requirements of the *Endangered Species Act* have been followed closely during
28 development of this 2022-2032 FMP for the Kenora Forest.

2.1.3.3.2 Habitat Classification

In the FMP, wildlife habitat is described in terms of the "forest units" defined in Section 2.1.3.1 of the FMP (see also the "Forest Unit Analysis" in the Section 5.1.3 of Supplementary Documentation B - Analysis Package), and the "landscape classes" identified by NDMNRF for the Boreal Landscape Guide. Landscape classes are defined in Section 2.1.3.2 of the FMP and Section 3.1.1.1 of the Landscape Guide. Landscape classes are groupings of forest unit-development stage combinations that are considered to be meaningful to wildlife.

The Boreal Landscape Guide contains specific coarse filter milestones for the Kenora Forest FMP (Table A1 in the Boreal Landscape Guide, FMP text Table 4) that must be addressed to ensure that an approximately natural amount, distribution, and composition of habitat (the coarse filter) are provided over the long term. These milestones are addressed in FMP objectives and targets in Table FMP-10. As required by the Boreal Landscape Guide, the FMP objectives and targets address the amount of area of key landscape classes, the amount of area of old growth, the area of red and white pine (all ages), the amount of area and patch size distribution of young forest, and the spatial distribution ("texture" or patchiness) of mature and older forest.

The Stand and Site Guide contains a great deal of other direction that strives to assist forest managers to conserve biological diversity. This has been incorporated into the FMP as: (i) prescriptions for Areas of Concern (AOCs), and (ii) Conditions on Regular Operations (CROs). Table FMP-11 describes the AOC prescriptions in detail (e.g., for water quality and the protection of shorelines and riparian forest, for bat hibernacula, bear dens, eagle and osprey nests, nests of other birds of prey, heron colonies, and AOCs for other species at risk - see more detail on species at risk in Section 2.1.4.1 below). CROs are described in FMP text Section 4.2.2.2, and address aspects related to providing habitat by emulating natural disturbances at the stand level (part of the coarse filter), such as by retaining downed woody material, providing living and dead wildlife trees in each harvest block, and by providing residual patches of unharvested forest in and/or adjacent to harvest blocks. The CROs also address certain fine-filter aspects, such as protection of occupied songbird nests and grouse nests, the protection of occupied or unoccupied roost trees or nest trees used by hawks, owls, or chimney swifts, protection of occupied or unoccupied stick nests used by ravens and birds of prey (other than eagles and ospreys), protection of furbearer dens, and protection of wetlands and woodland pools.

2.1.3.3.3 Spatial Arrangement of Habitat

As discussed above, Ontario's coarse filter approach to management, as described in the Boreal Landscape Guide and the Stand and Site Guide, is designed to produce an approximately natural amount and spatial arrangement (distribution and patch size) of habitat for wildlife in general, including the American marten, moose, and all other species. The overall spatial arrangement of habitat is addressed in the FMP by referring to the texture indicators in the Boreal Landscape Guide (Table A1), by providing wildlife trees throughout harvest blocks (Section 3.2.3.1 of the Stand and Site Guide), similar to what a natural disturbance such as wildland fire would do in this area. In addition, protecting all known occupied nests, dens, and, in some cases, roost trees through Areas of Concern (AOCs) or Conditions on Regular Operations (CROs) will conserve the current spatial distribution of key habitat features where AOCs or CROs are appropriate.

The Boreal Landscape Guide (Section 3.5) and the Stand and Site Guide (Section 3.3.4) contain specific direction to enable managers to identify large landscape patches (LLPs) in the forest that can be used to meet biodiversity objectives and their targets associated with Landscape Guide indicators.

In the portion of the Kenora forest with continuous caribou distribution, the development of a tract-based Dynamic Caribou Habitat Schedule (DCHS) is an example of a mosaic of contiguous LLPs that was used to meet objectives for caribou in this FMP. The spatial arrangement of habitat is important to caribou since the Kenora Forest is within the continuous range of caribou defined by NDMNRF in "Ontario's Woodland Caribou Conservation Plan" (the CCP), therefore the spatial habitat requirements of the Boreal Landscape Guide apply to address direction in the CCP.

Finally, the Boreal Landscape Guide (Section 3.5) and the Stand and Site Guide (Section 3.3.4) also contain specific direction to enable managers to identify large landscape patches in the forest that can be managed to enhance habitat specifically for moose, deer or elk, while meeting the milestones in the Boreal Landscape Guide. These are identified as "moose/deer emphasis areas" in the Stand and Site Guide. Moose/Deer Emphasis Area planning is not recommended nor required in areas where caribou habitat management is emphasized, such as the caribou zone with DCHS blocks on the Kenora Forest.

2.1.3.3.4 Habitat for Selected Wildlife Species

Selected Wildlife Species may be identified by the Planning Team to address desired forest and benefits identified by the planning team and LCC with input from the public and First Nation and Métis communities. Caribou and Moose are selected wildlife species in the 2022-2032 FMP that require specific projected habitat modelling in habitat emphasis areas (see Table FMP-7).

Habitat for all species that inhabit the Kenora Forest are accounted for through the management of forest composition, age structure and landscape pattern required by management indicators and milestones, in accordance with the *Forest Management Guide for Boreal Landscapes* (BLG). See Table FMP-10 for Boreal Landscape Guide indicator projections for caribou and moose habitat in their respective emphasis areas. Moose habitat is planned for and considered based on various BLG indicators for the whole forest and within identified Moose Emphasis Areas (MEAs). See Table FMP-10 for current and projected moose habitat in MEAs (by habitat type).

The BLG set four caribou habitat indicators for the Kenora Forest caribou zone: (a) amount of caribou refuge habitat, (b) amount of caribou winter habitat (combined, includes used and preferred), (c) texture of caribou refuge habitat and (d) texture of caribou winter combined habitat). These indicators are calculated for the northern portion of the Kenora Forest in the range of continuous caribou distribution.

Since there has been no forest access into the caribou zone prior to this plan period, the Plan Start 2022 caribou habitat in the caribou zone is a result of natural processes. The area of the Kenora Forest within the Caribou Continuous Range has had multiple large fires since the 1980s which have resulted in much of the treed habitat being <40 years old (at plan start in 2022). Notable wildfires, since the 1980s, have included KEN73 (in 1983 – 82, 323 ha), KEN186 (in 1988 – 2,710 ha), KEN71 (in 2018 – 10,684 ha) and KEN51 (in 2021 – 200,600 ha; 109,900 ha on the Kenora Forest). The large 1983 burn turns 41 years old at year 2024, which will provide good caribou habitat as the block is in excellent pure conifer condition, shallow soil and wide open rock knobs for lichen availability, and lacks almost any other disturbance. This area will be considered during development of DCHS block delineation and operations timing.

FINAL PLAN NOTE: The following Plan Start 2022 caribou habitat data describes the condition prior to fire Kenora 51 in 2021. This section of the FMP was prepared for LTMD and Draft Plan, prior to the fire's occurrence, and the forest description and LTMD components of the FMP (FMP Stages 1-2) are not revised for final plan.

1 Qualitative notations of some changes resulting from Fire Kenora 51 in 2021 are
2 included.

3

4 (a) Caribou Refuge Habitat:

5 Figure 14 shows that the amount of caribou refuge habitat (in the caribou zone) at 2022
6 Plan Start, is above the SRNV for the Kenora Forest caribou zone. The provision of
7 abundant caribou refuge habitat, while above that estimated for the Kenora Forest, is
8 very good for caribou, and very good for this specific indicator. Maintaining the amount
9 of caribou refuge habitat within or above the IQR of the SRNV will be considered during
10 development of the LTMD.

11 **FINAL PLAN NOTE:** For Final Plan, Figure 14 was updated with the revised estimate
12 of Caribou Refuge Habitat at Plan Start 2022, considering 2021 wildfires (Fire KEN51
13 specifically) and revised forecast depletions. This figure shows the decrease in Caribou
14 Refuge Habitat from the LTMD/Draft Plan land base (pink crosses) and that revised for
15 the final plan (blue squares). The area of caribou refuge habitat declined by 19,600
16 hectares due to Fire KEN51, to below the IQR for caribou refuge habitat on the forest.
17 This decline in caribou refuge habitat may have been mitigate as a result of the high
18 component of shallow spruce and conifer, as well as sandy jack pine sites that retain
19 functionally as refuge habitat, even at early successional stages.

20

21 (b) Caribou Winter (Combined) Habitat:

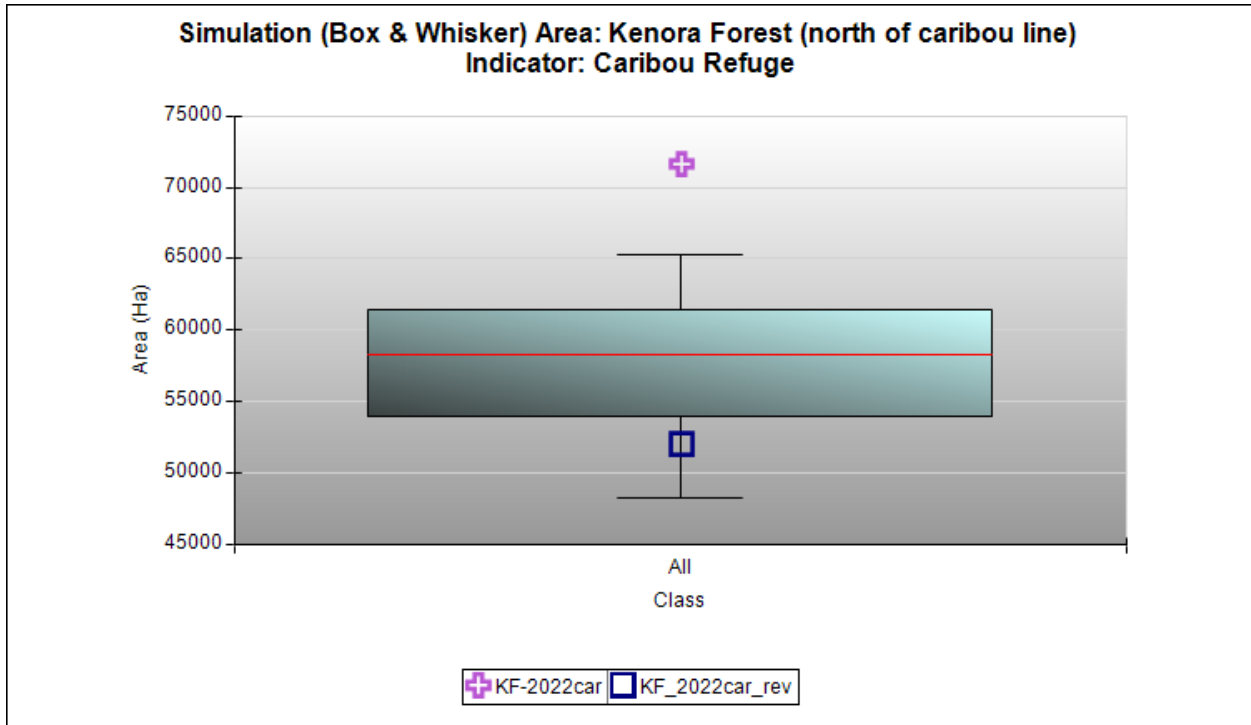
22 Figure 15 shows achievement of the amount of caribou winter combined habitat (in the
23 caribou zone) at 2022 Plan Start, in relation to the IQR of the SRNV for the Kenora
24 Forest caribou zone. Achievement of winter combined habitat is close to the middle of
25 the IQR which is a good condition for caribou habitat. LTMD development will be
26 undertaken to maintain caribou winter habitat within the IQR.

27 **FINAL PLAN NOTE:** For Final Plan, Figure 15 was updated with the revised estimate
28 of Caribou Winter Habitat at Plan Start 2022, considering 2021 wildfires (Fire KEN51
29 specifically) and revised forecast depletions. This figure shows the decrease of 23,900
30 ha in Caribou Winter Habitat from the LTMD/Draft Plan land base (pink crosses) and
31 that revised 2022 land base for the final plan (blue squares). The revised Plan Start
32 2022 land base now shows less caribou winter habitat than the IQR range.

33

1 **Figure 14** Caribou Refuge Habitat Indicator Achievement for 2022 Plan Start

2

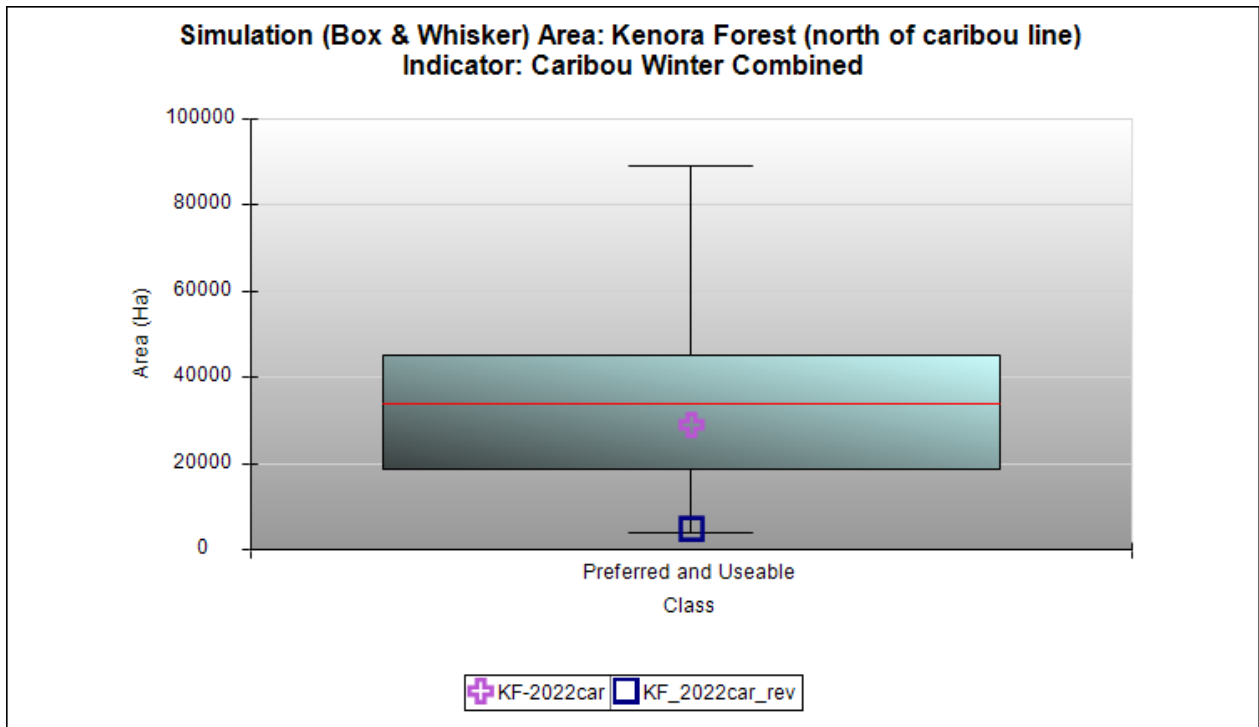


3

4

5 **Figure 15** Caribou Winter Habitat Indicator Achievement for 2022 Plan Start

6



7

8

1 c) and d) Texture of Caribou Habitat (Refuge and Winter):

2 Texture refers to the percent concentration (or “patchiness”) of caribou habitat found
3 within each hexagon on the Kenora Forest. Texture of caribou habitat is evaluated at
4 two scales using Ontario’s Landscape Tool, specifically at 60 km² (6,000 ha) and 300
5 km² (30,000 ha) hexagon scales.

6
7 For caribou habitat, the smaller scale corresponds with the “*Forest Management*
8 *Guidelines for the Conservation of Woodland Caribou: A Landscape Approach*” where
9 core winter ranges and summer ranges varied from 40 to 60 km². Therefore, reaching
10 the milestone for this smaller scale is crucial for individual home ranges. For the larger
11 30,000 ha scale, achievement would ensure sufficient connectivity at the range level for
12 caribou, whose ranges span multiple forest management units. Although woodland
13 caribou do not migrate at large scales such as the northern tundra ecotype, having
14 connectivity at the range level is important to have sufficient year round supply of
15 habitat.

16

17 c) Texture of Caribou Refuge Habitat:

18 The 2022 Plan Start 60 km² scale distribution is shown in Figure 16 and Figure 18
19 (map), and at the 300 km² hexagon scale distribution is shown in Figure 17 and Figure
20 19 (map).

21 **FINAL PLAN NOTE:** For Final Plan, Figure 16 and Figure 17 were updated with the
22 revised texture of Caribou Refuge Habitat Plan Start 2022, considering 2021 wildfires.
23 These figures show the change in Caribou Refuge Habitat texture from the LTMD/Draft
24 Plan land base (KF-2022) and that revised for the final plan (KF_2022_rev). Maps in
25 Figure 18 and Figure 19 show the texture change spatially.

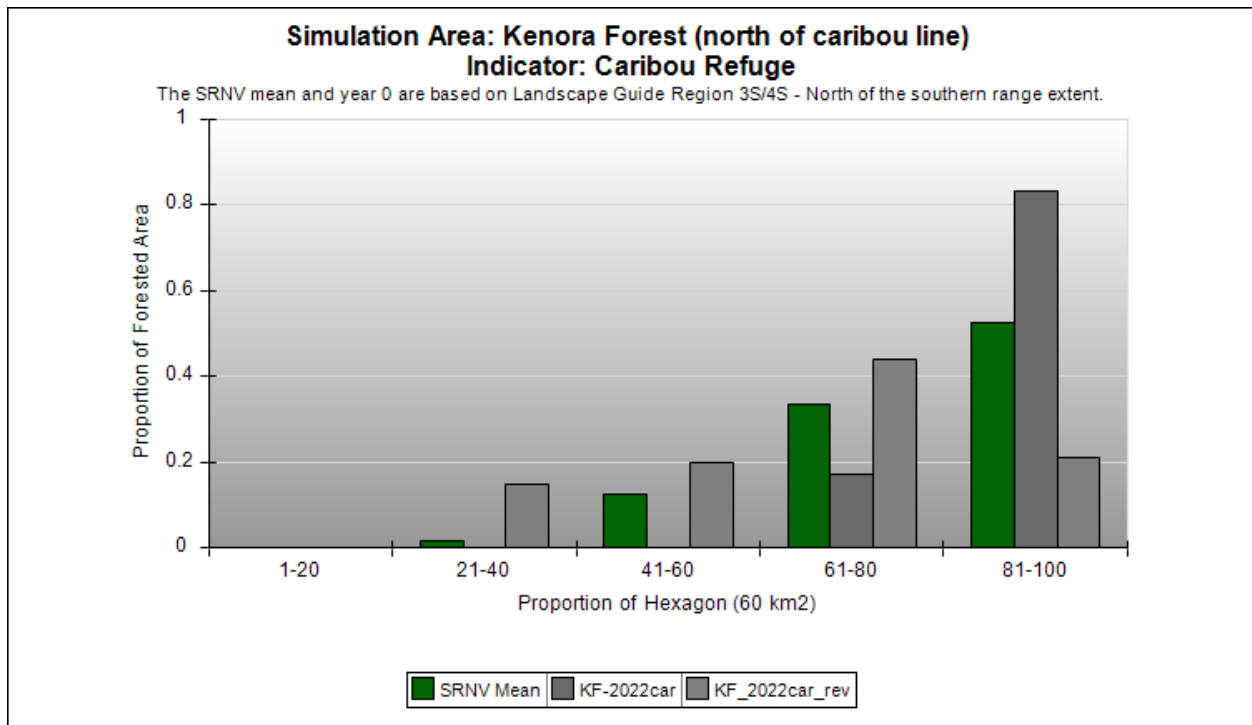
26

27 For caribou refuge habitat at the 60 km² hexagon scale, the plan start of concentrations
28 >60% was at 100% for LTMD, and is 64% with the revised Plan Start 2022 land base.
29 The mean SRNV (desirable level) for this indicator is 87%. At the 300 km² hexagon
30 scale, texture of caribou refuge habitat >60% concentration at plan start was 100%, now
31 78% with the revised land base, and the mean SRNV (desirable level) for this indicator
32 is 92%. As described previously, the amount of refuge habitat in the caribou zone
33 decreased as a result of Fire KEN51 in 2021, and this indicator shows that the
34 remaining refuge habitat continues to be spatially distributed in only a few dense
35 patches.

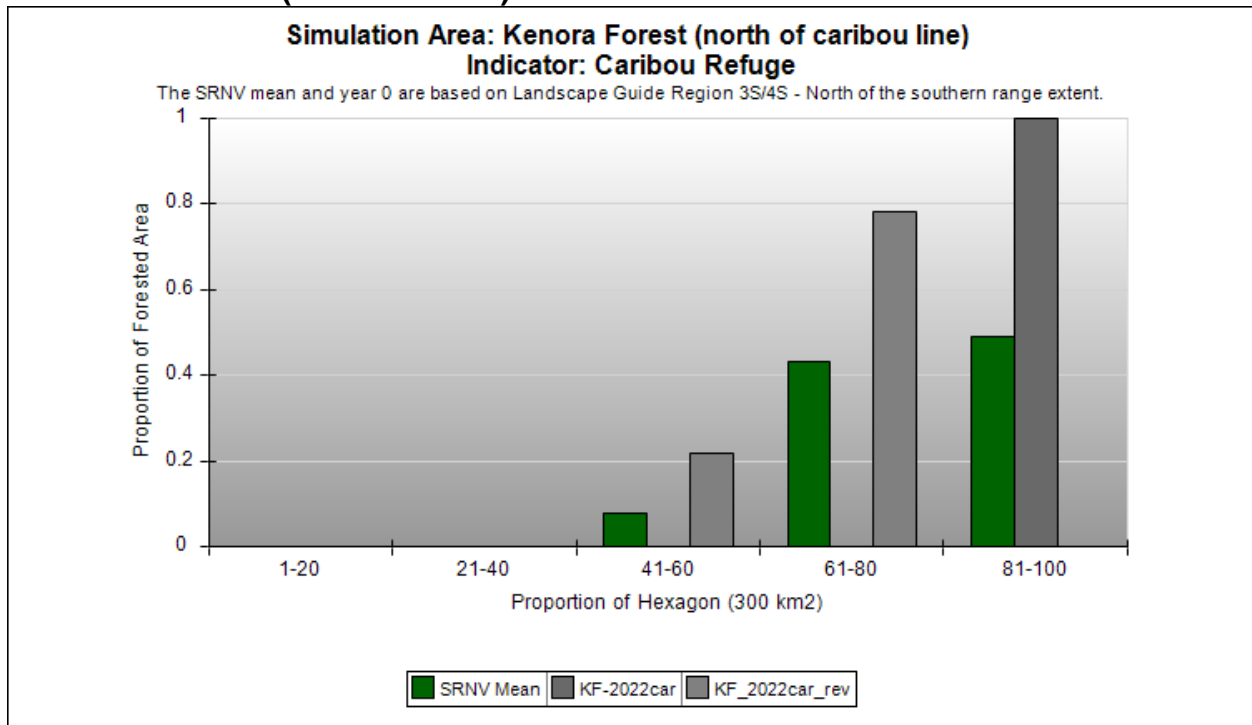
36

37 Management efforts in future forest management plans will be explored to continue
38 achievement if the SRNV for texture of caribou refuge habitat at both the 60 km² and
39 300 km² scales, with the focus of the texture in the > 60% concentration classes.

1 **Figure 16 Caribou Refuge Habitat Texture Indicator Achievement – 2022 Plan**
 2 **Start (60 km² scale)**
 3



4 **Figure 17 Caribou Refuge Habitat Texture Indicator Achievement – 2022 Plan**
 5 **Start (300 km² scale)**
 6
 7



8

1 **Figure 18 Landscape Pattern Texture of Caribou Refuge Habitat (60 km² scale)**

2
3 (Left: LTMD Map)

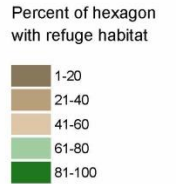
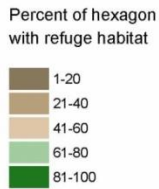
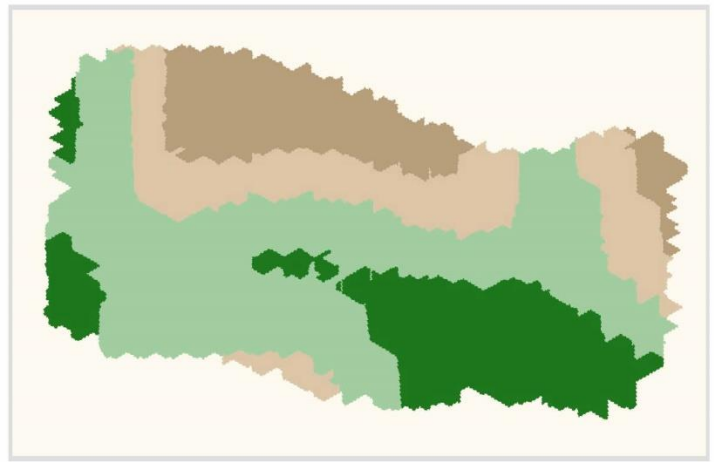
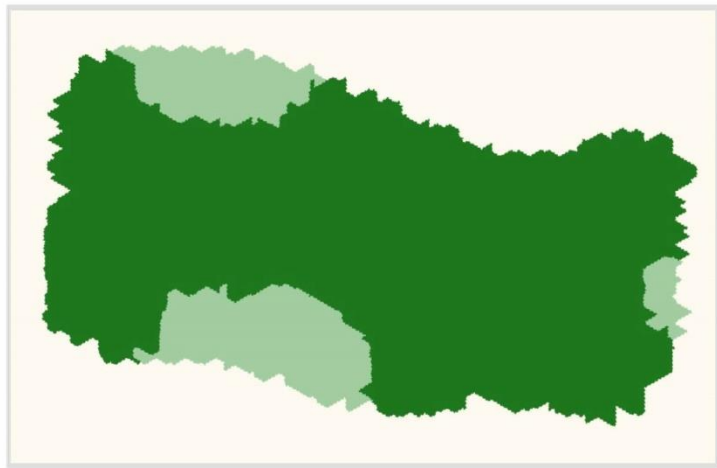
(Right: Post 2021-Fires Map)

1 KF-2022car 2022

1 KF_2022car_rev 2022

Caribou Refuge Habitat at 60 km2

Caribou Refuge Habitat at 60 km2



7

5
6

1 **Figure 19 Landscape Pattern Texture of Caribou Refuge Habitat (300 km² scale)**

2
3 (Left: LTMD Map)

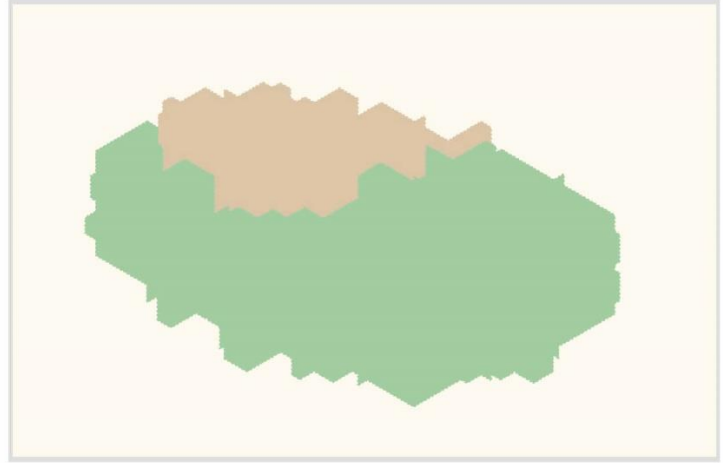
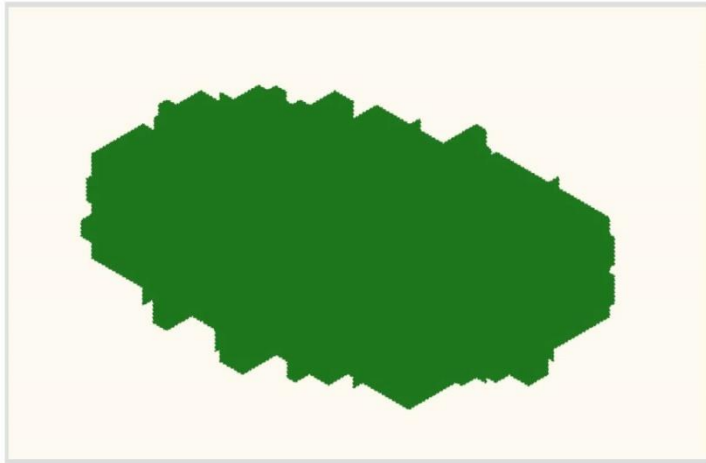
(Right: Post 2021-Fires Map)

4
5
① KF-2022car 2022

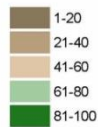
① KF_2022car_rev 2022

Caribou Refuge Habitat at 300 km²

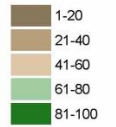
Caribou Refuge Habitat at 300 km²



Percent of hexagon with refuge habitat



Percent of hexagon with refuge habitat



7
8

6

1 d) Texture of Caribou Winter Habitat:

2

3 Texture of caribou winter habitat is evaluated at two scales using Ontario's Landscape
4 Tool, specifically at 60 km² (6,000 ha) and 300 km² (30,000 ha) hexagon scales.

5

6 The 60 km² scale distribution for texture of caribou winter habitat is shown in Figure 20
7 and Figure 22 (map), and the 300 km² hexagon scale distribution is shown in Figure 21
8 and Figure 23 (map) for 2022 Plan Start.

9

10 **FINAL PLAN NOTE:** For Final Plan, Figure 20 and Figure 21 were updated with the
11 revised texture of Caribou Refuge Habitat Plan Start 2022, considering 2021 wildfires.
12 These figures show the change in Caribou Winter Habitat texture from the LTMD/Draft
13 Plan land base (KF-2022) and that revised for the final plan (KF_2022_rev). Maps in
14 Figure 22 and Figure 23 show the texture change spatially.

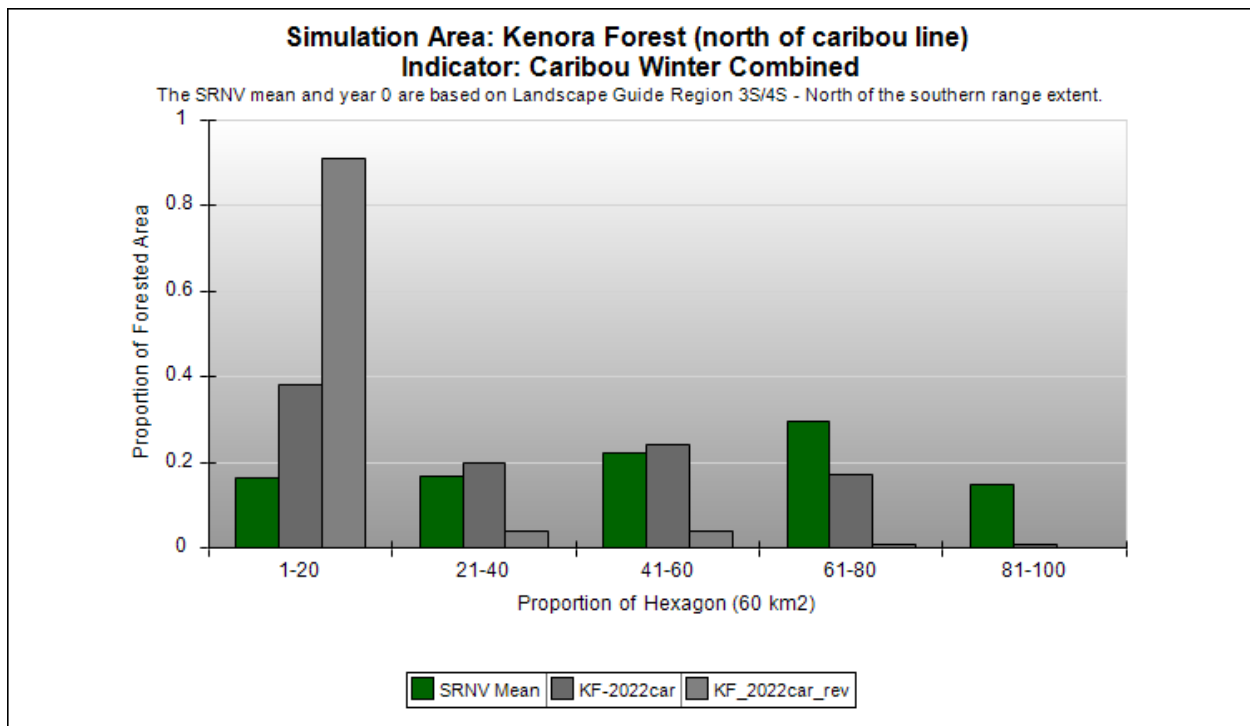
15

16 For caribou winter habitat at the 60 km² hexagon scale, the plan start of concentrations
17 >60% was 18% at LTMD and is now 1% with the revised Plan Start land base. The
18 mean SRNV (desirable level) for this indicator at this scale is 45% >60%. At the 300
19 km² hexagon scale, texture of caribou winter habitat >60% concentration at plan start is
20 0% (LTMD and revised land bases) and the mean SRNV (desirable level) for this
21 indicator is 40%.

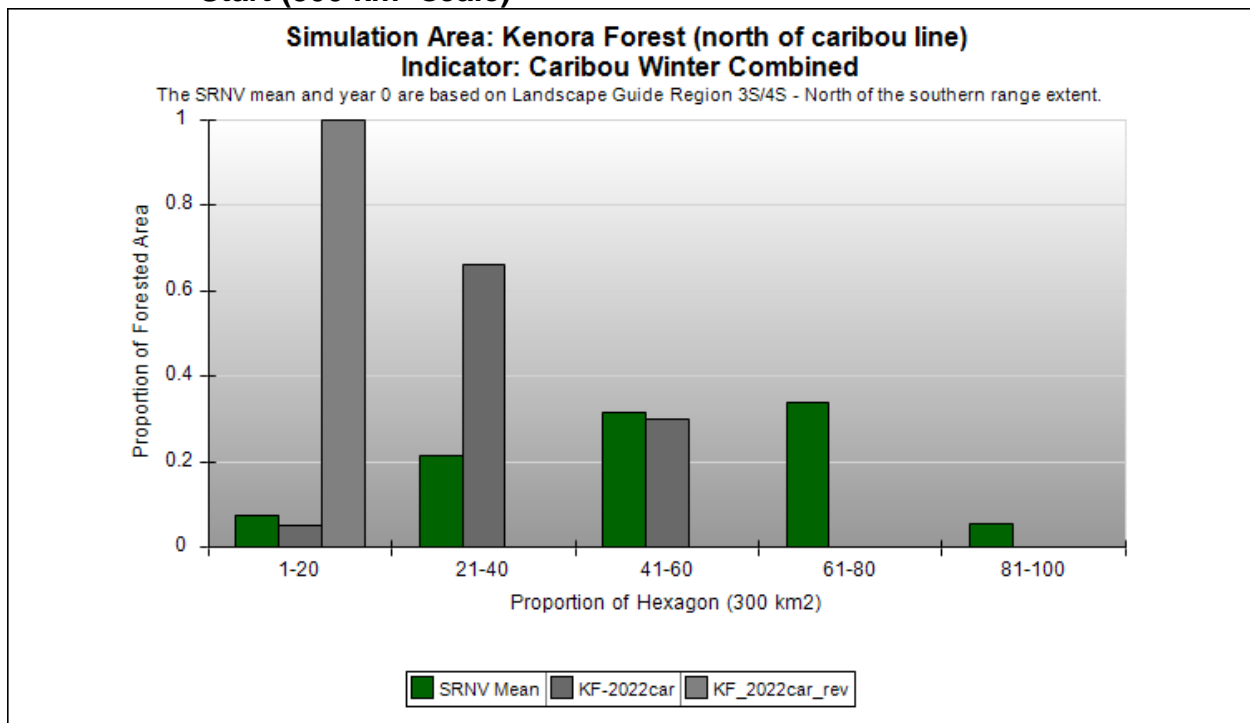
22

23 Management efforts during LTMD development and future FMPs will be to maintain
24 required amounts of caribou winter habitat and to increase the density of patchiness
25 within or above the desirable levels for both the 60 km² and 300 km² scales, with the
26 focus of the texture in the > 60% concentration classes.

1 **Figure 20 Caribou Winter Habitat Texture Indicator Achievement – 2022 Plan**
 2 **Start (60 km² scale)**
 3



4
 5
 6 **Figure 21 Caribou Winter Habitat Texture Indicator Achievement – 2022 Plan**
 7 **Start (300 km² scale)**



1 **Figure 22 Landscape Pattern Texture of Caribou Winter Habitat (60 km² scale)**

2
3 (Left: LTMD Map)

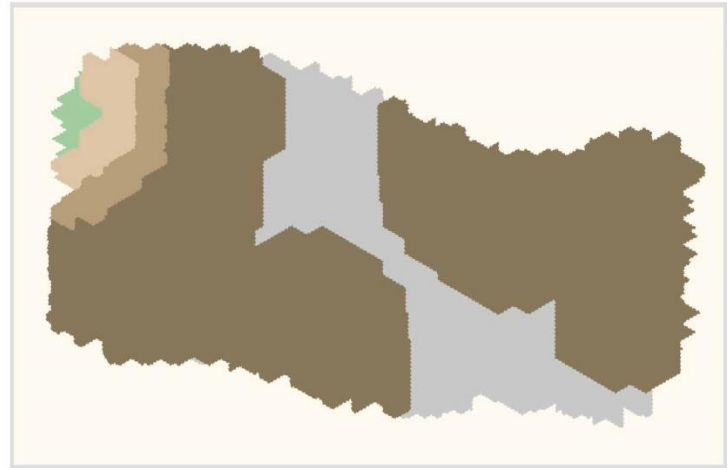
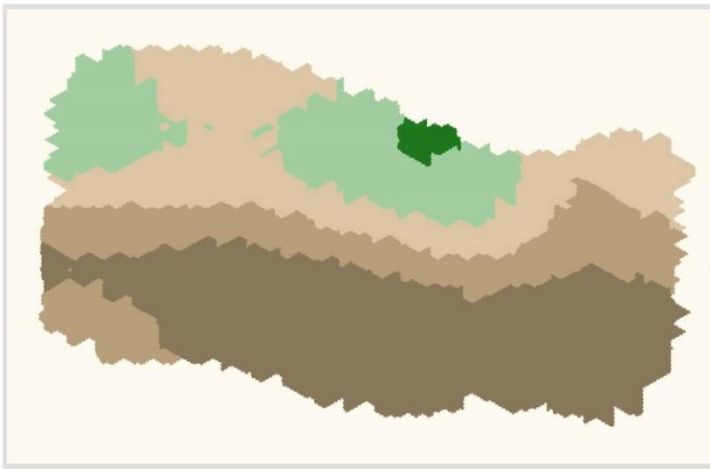
(Right: Post 2021-Fires Map)

4
① KF-2022car 2022

① KF_2022car_rev 2022

Caribou Winter Combined Habitat at 60 km²

Caribou Winter Combined Habitat at 60 km²



Offset 1 of 3
0 10 20 km

Percent of hexagon with winter habitat
1-20
21-40
41-60
61-80
81-100

Offset 1 of 3
0 10 20 km

Percent of hexagon with winter habitat
1-20
21-40
41-60
61-80
81-100

6

5

1 **Figure 23 Landscape Pattern Texture of Caribou Winter Habitat (300 km² scale)**

2
3 (Left: LTMD Map)

(Right: Post 2021-Fires Map)

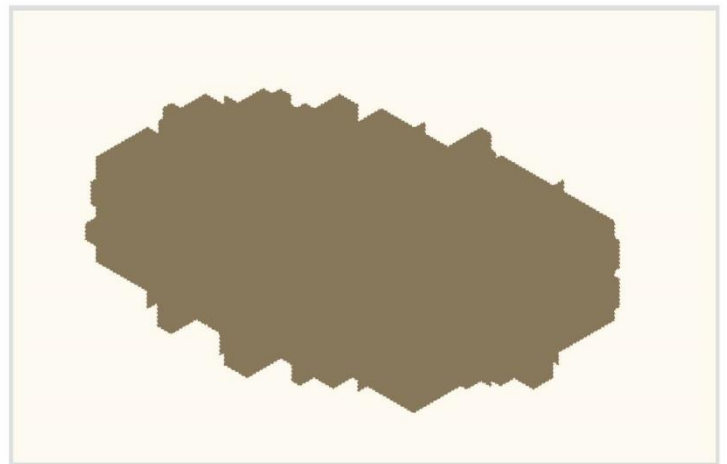
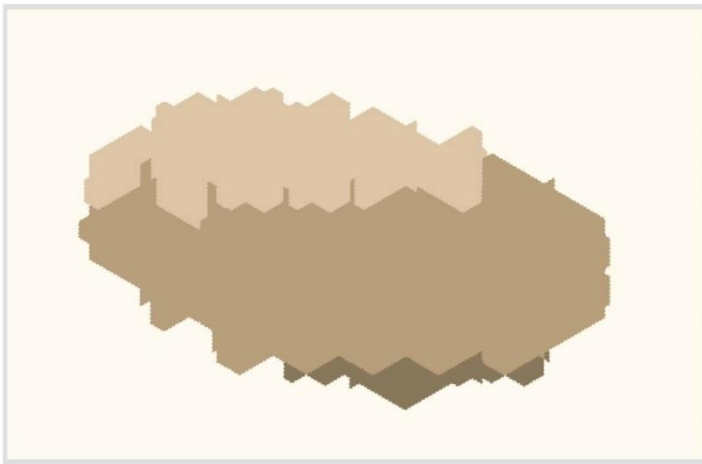
4

1 KF-2022car 2022

1 KF_2022car_rev 2022

Caribou Winter Combined Habitat at 300 km²

Caribou Winter Combined Habitat at 300 km²



5

1 2.1.4 Forest Resources

2 2.1.4.1 Inventories and Information for Species at Risk

3

4 Ontario's *Endangered Species Act* (SO 2007, Section 5) identifies the following
5 categories of species at risk:

6 **Extirpated:** lives somewhere in the world, lived at one time in the wild in
7 Ontario, but no longer lives in the wild in Ontario.

8 **Endangered:** lives in the wild in Ontario but is facing imminent extinction or
9 extirpation

10 **Threatened:** lives in the wild in Ontario, is not endangered, but is likely to
11 become endangered if steps are not taken to address factors
12 threatening to lead to its extinction or extirpation.

13 **Special Concern:** lives in the wild in Ontario, is not endangered or threatened,
14 but may become threatened or endangered because of a
15 combination of biological characteristics and identified threats.
16

17 In Ontario, the Committee on the Status of Species at Risk in Ontario (COSSARO)
18 reviews the status of species that occur within the boundaries of the province and
19 assigns an "at risk" category, which could include any of the above categories, or "not at
20 risk". The federal listing body is known as the Committee on the Status of Endangered
21 Wildlife in Canada (COSEWIC).
22

23 A wide variety of sources was consulted to identify the species at risk that could occur in
24 the Kenora Forest, including:

- 25 • annual aerial stick nest surveys conducted by NDMNRF (e.g., for the bald eagle),
- 26 • NDMNRF's caribou surveys conducted in support of the Caribou Conservation
27 Plan,
- 28 • periodic moose aerial inventories conducted by NDMNRF in which species such
29 as wolverine and caribou can be detected,
- 30 • NDMNRF's Natural Heritage Information Centre (NHIC) database, a compilation
31 of historical and recent records submitted by NDMNRF, the public, and others
32 (www.ontario.ca),
- 33 • iNaturalist website ([www. iNaturalist.org](http://www.iNaturalist.org)),
- 34 • surveys conducted by naturalists and biologists, such as:
 - 35 ○ the Ontario Breeding Bird Atlas (www.birdsontario.org);
 - 36 ○ the eBird program (<http://eBird.org>)
 - 37 ○ the Ontario Reptile and Amphibian Atlas (www.ontarionature.org)
 - 38 ○ the Ontario Butterfly Atlas (www.ontarioinsects.org)

- 1 ○ the Atlas of Ontario Odonata (dragonflies and damselflies; available from
- 2 NHIC), and
- 3 ○ the Atlas of the Mammals of Ontario (ongoing; www.ontarionature.org),
- 4 • trapper records submitted to NDMNRF (e.g., for wolverine),
- 5 • information compiled by Bat Conservation International (www.batcon.org),
- 6 • species at risk range maps published on NDMNRF's web site (www.ontario.ca),
- 7 • species at risk occurrences published in status reports and assessment reports
- 8 by agencies responsible for species status assessments (national: COSEWIC
- 9 <http://www.cosewic.gc.ca>; provincial: COSSARO on NDMNRF's web
- 10 [site www.ontario.ca](http://www.ontario.ca)),
- 11 • published recovery strategies (www.ontario.ca), and
- 12 • the 2012-2022 FMP for the Kenora Forest, Phases 1 and 2.

13 14 **Using Coarse and Fine Filter Approaches to Provide Habitat for Species at Risk -**

15 The species at risk that are known or suspected to occur in the Kenora Forest are
16 described below. For all of these species, the following general coarse filter direction
17 will address some of their habitat needs: (i) providing an approximately natural amount
18 and distribution of suitable forest habitat over the long term by following Ontario's
19 coarse filter habitat direction (see the Boreal Landscape Indicators in Table 4 above,
20 Table FMP-10 and Supplementary Documentation B - Analysis Package), and (ii)
21 applying Conditions on Regular Operations (CROs) for retained wildlife trees and
22 retained patches of unharvested forest in harvested blocks according to direction in the
23 Stand and Site Guide. Other non-species specific fine-filter approaches (e.g. Areas of
24 Concern prescriptions (AOCs) and CROs) may indirectly benefit or support Species At
25 Risk, however their intent is not specific to SAR protection. Together, coarse and fine
26 filter actions are consistent with the requirements of the *Endangered Species Act* (S.O.
27 2007), the *Crown Forest Sustainability Act* (S.O. 1994), the *Fish and Wildlife*
28 *Conservation Act* (S.O. 1997), the *Migratory Birds Convention Act* (S.C. 1994), and
29 other pertinent legislation.

30
31 Species at Risk known or suspected to occur on the Kenora Forest are listed in Table 5,
32 followed by a description of the species' habitat needs and occurrence on the Kenora
33 Forest. The habitat description also includes a reference to how habitat for the Species
34 at Risk was considered in development of this FMP.

1 Table 5 Species at Risk on the Kenora Forest

Common Name	Scientific Name	Endangered Species Act Status
Birds		
American White Pelican	<i>Pelecanus erythrorhynchos</i>	Threatened
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Special Concern
Bank Swallow	<i>Riparia riparia</i>	Threatened
Barn Swallow	<i>Hirundo rustica</i>	Threatened
Black Tern	<i>Chlidonias niger</i>	Special Concern
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened
Canada Warbler	<i>Cardellina canadensis</i>	Special Concern
Chimney Swift	<i>Chaetura pelagica</i>	Threatened
Common Nighthawk	<i>Chordeiles minor</i>	Special Concern
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Threatened
Eastern Wood-pewee	<i>Contopus virens</i>	Special Concern
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Special Concern
Golden eagle	<i>Aquila chrysaetos</i>	Endangered
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Special Concern
Horned Grebe	<i>Podiceps auritus</i>	Special Concern
Least Bittern	<i>Ixobrychus exilis</i>	Threatened
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Special Concern
Peregrine Falcon	<i>Falco peregrinus</i>	Special Concern
Piping Plover	<i>Charadrius melodus</i>	Endangered
Red-Headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Special Concern
Short-eared Owl	<i>Asio Flammeus</i>	Special Concern
Wood Thrush	<i>Hylocichla mustelina</i>	Special Concern
Yellow Rail	<i>Coturnicops noveboracensis</i>	Special Concern
Mammals		
American Badger	<i>Taxidea taxus</i>	Endangered
Cougar	<i>Puma concolor</i>	Endangered
Gray Fox	<i>Urocyon cinereoargenteus</i>	Threatened
Little Brown Myotis	<i>Myotis lucifugus</i>	Endangered
Northern Myotis	<i>Myotis septentrionalis</i>	Endangered
Wolverine	<i>Gulo gulo</i>	Threatened
Woodland Caribou	<i>Rangifer tarandus</i>	Threatened
Reptiles		
Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern
Insects		
Monarch Butterfly	<i>Danaus plexippus</i>	Special Concern
Yellow-banded Bumblebee	<i>Bombus terricola</i>	Special Concern
Plants		
Pale Showy Goldenrod	<i>Solidago speciosa</i>	Threatened
Small-flowered Lipocrapha	<i>Lipocarpa micrantha</i>	Threatened
Western Silvery Aster	<i>Symphyotrichum sericeum</i>	Endangered
Fish		
Deepwater Sculpin	<i>Myoxocephalus thompsonii</i>	not listed provincially
Lake Sturgeon (NW Ontario population)	<i>Acipenser fulvescens</i>	Threatened
Shortjaw Cisco	<i>Coregonus zenithicus</i>	Threatened
Silver Chub	<i>Macrhybopsis storeriana</i>	Threatened
Silver Lamprey	<i>Ichthyomyzon unicuspis</i>	Special Concern

2



1 a) Birds

2

3 **American White Pelican (*Pelecanus erythrorhynchos*) – Threatened – *The***

4 *American Pelican* is one of the largest and most distinctive birds in North America, with
5 a 3 metre wing span, a large yellow-orange bill and throat pouch, and glistening white
6 plumage, save for the black wing tips. Pelicans nest in colonies, sometimes at quite
7 high densities, on isolated islands in freshwater lakes of central and western North
8 America. A nesting pair produces two or occasionally three white eggs. The nest is a
9 shallow debris-rimmed depression in the ground, or a low mound of matted vegetation
10 and earth. Both parents incubate the eggs. Flocks of this gregarious water bird
11 sometimes hunt communally for prey, which consists mostly of fish with little or no sport
12 or commercial value and amphibians.

13

14 Lake of the Woods has a large proportion of Ontario's breeding population of American
15 White Pelicans. Citizen science programs such as iNaturalist and eBird also report
16 observations. While populations are relatively robust they nevertheless remain
17 vulnerable to disturbance of nesting sites by recreational boaters, disease and in some
18 cases changes in water levels. Threats on their wintering grounds include human
19 persecution and pollution. Forestry operations will not impact nesting habitat for
20 American White Pelicans which are currently confined to Islands.

21

22 **Bald Eagle (*Haliaeetus leucocephalus*) - Special Concern** - The bald eagle is
23 common in North America and on the Kenora Forest. Citizen science programs such as
24 eBird indicate that Bald Eagles are relatively abundant where habitat is available within
25 the forest. As of February 2021, Land Information Ontario (LIO) identified 1,006 records
26 of bald eagle nests within the boundaries of the Kenora Forest.

27

28 This majestic bird is not considered to be at risk nationally. The bald eagle hunts
29 primarily for fish in large lakes and rivers. It builds a huge stick nest in a large, living,
30 sturdy tree with good access for nesting adults, close to the shore of a large water body.
31 The nesting pair will raise 1-2 (rarely 3) young. A living super-canopy tree (hardwood or
32 conifer) is almost always chosen. A nesting territory may contain one active nest and
33 one or two alternate (temporarily inactive) nests that were used previously and could be
34 used again; nests may be used for many consecutive years.

35

36 Like other birds of prey, the bald eagle was affected by toxic chemical poisoning from
37 the 1960s through the early 1970s and the population declined significantly throughout
38 its range in North America as a result. The species was listed as endangered across
39 Ontario until 2006 when it was down-listed to special concern in the northwest.
40 Northwestern Ontario has been a notable stronghold for the bald eagle. The bald eagle

1 has recovered well since the 1970s and has increased throughout its range in the
2 province, which extends from the shores of Lakes Ontario and Erie to Hudson Bay, and
3 from east to west. Depending on location and exposure, the species can be sensitive to
4 disturbances during the nesting season.

5
6 Area of concern prescriptions have been applied around all known bald eagle nests in
7 the Kenora Forest for many years. In this FMP, the needs of the bald eagle will be met
8 by providing habitat using the coarse filter approach described above, and also by: (i)
9 retaining unharvested stands of mature trees near shorelines through AOC
10 prescriptions for water quality (Table FMP-11, AOC W01-W07), and by (ii) applying
11 AOC prescriptions around primary and inactive bald eagle nests (Table FMP-11, AOCs
12 N01 and N02), including new nests that are discovered during the course of operations.
13 Forest management that protects existing nests, water quality, and provides a long term
14 supply of suitable nesting habitat would continue to be beneficial to the bald eagle.

15
16 **Bank Swallow (*Riparia riparia*) - Threatened** - The recovery strategy for the bank
17 swallow (Falconer et al. 2016) estimated there are ~ 400,000 bank swallows in Ontario,
18 up from ~ 200,000 at the time the species was listed as threatened (2013). LIO has
19 recorded values, as well as citizen science programs such as eBird have observations
20 of bank swallow in the Kenora Forest where habitat is suitable. There is potential for
21 the bank swallow to nest in new and established aggregate pits.

22
23 Bank swallows forage for small insects while in flight. They nest in colonies at a wide
24 variety of natural and artificial sites with vertical banks that are inaccessible to predators
25 but where the swallows can dig horizontal burrows in soft, stable soil. Periodic episodes
26 of erosion seem important to ensure the soil in which the swallows are nesting remains
27 soft enough to dig. River banks, bluffs, forestry aggregate pits, road cuts, and stock
28 piles of soil are used. Status reports suggest that habitat may have declined on the
29 breeding range in Canada as a result of erosion control projects, flood control (dams),
30 aggregate management activities, conversion of pastureland to cropland, and
31 afforestation that converts open land to forest. Nests are vulnerable to damage during
32 aggregate excavation activities, and the supply of habitat for bank swallows may be
33 reduced by erosion control measures that create gradual slopes and reduce the
34 intensity and frequency of beneficial erosion.

35
36 In this FMP, the needs of the bank swallow will be met by providing habitat using the
37 coarse filter approach described above, and by applying an AOC prescription around
38 active nest sites (Table FMP-11, AOC N08).

1 **Barn Swallow (*Hirundo rustica*) - Threatened** - The barn swallow is widespread
2 around the world, and is found on every continent except Antarctica. In Ontario, the
3 barn swallow occurs from extreme southern Ontario to the James Bay coast and is
4 described in the provincial recovery strategy (Heagy et al. 2014 ¹) as "still common and
5 widespread in much of Ontario". It is most common in agricultural areas where it builds
6 its mud nest on the walls, ledges, or beams of an open building that allows swallows to
7 enter and leave at will. Bridges are also used as nest sites. This swallow probably
8 expanded its range in Ontario as human settlements expanded, since it prefers to nest
9 in or on structures built by people. The barn swallow is an aerial insectivore that forages
10 for insects while in flight. The cause of its population decline is not known but parallels
11 declines of other aerial insectivores.

12
13 As of February 2021, LIO identified barn swallow nesting sites on the Kenora Forest.
14 Citizen science programs such as eBird indicate presence on the forest where habitat is
15 suitable. There is the potential for the barn swallow to use bridges, garages, and other
16 buildings established for forestry activities within the working forest.

17
18 In this FMP, the needs of the barn swallow will be met by providing habitat using the
19 coarse filter approach described above, and by applying an AOC prescription for the
20 barn swallow around occupied nests (Table FMP-11, AOC N17).

21
22 **Black Tern (*Chlidonias niger*) - Special Concern** - The black tern is widely but very
23 sparsely distributed in Ontario. The Breeding Bird Atlas shows that most occurrences
24 are just south of the southern edge of the Canadian Shield in southern Ontario, with
25 only a few in the boreal forest region. The black tern nests on floating mats of
26 vegetation, patches of mud, or upturned roots in small colonies in or very close to open
27 shallow water in marshes (especially cattail marshes). This tern eats larger insects
28 (grasshoppers, dragonflies, moths, beetles) which it catches in flight. Observations of
29 this marsh-nesting bird is recorded in eBird (2021), and in LIO.

30

1 Heagy, A., D. Badzinski, D. Bradley, M. Falconer, J. McCracken, R.A. Reid and K. Richardson.
2014. Recovery Strategy for the Barn Swallow (*Hirundo rustica*) in Ontario. Ontario Recovery
Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry,
Peterborough, Ontario.

1 Black tern nesting is threatened by activities that may change the water level, including
2 road and culvert work. Black terns generally nest in large waterbodies with water levels
3 that are not impacted by road or culvert work. Marshes inhabited by the black tern are
4 not subject to forest management activity.

5
6 In this FMP, the needs of the black tern will be met by applying an AOC prescription
7 around the wetlands used by these birds for nesting (Table FMP-11, AOC W06).

8
9 **Bobolink (*Dolichonyx oryzivorus*) – Threatened** – The bobolink is a medium sized
10 songbird found in grasslands and hayfields. In their summer breeding season, male
11 Bobolinks are black with a white back and yellow collar. By late summer, males lose
12 their breeding plumage to resemble the female’s tan colour with black stripes. Bobolinks
13 spend much of their time out of sight on the ground feeding on insects and seeds.

14
15 Historically, Bobolinks lived in North American tallgrass prairie and other open
16 meadows. With the clearing of native prairies, Bobolinks moved to living in hayfields.
17 Bobolinks often build their small nests on the ground in dense grasses. Both parents
18 usually tend to their young, sometimes with a third Bobolink helping.

19
20 The Atlas of the Breeding Birds of Ontario has several confirmed Bobolink sightings
21 listed for the Lake of the Woods area. LIO and eBird also record sites and observations
22 on the Kenora Forest near Morson in the south Lake of the Woods area. The
23 agricultural area west of Dryden (east of the Kenora Forest) has several documented
24 sites where bobolinks nest, primarily in farmer’s fields. Forestry operations on the
25 Kenora Forest are not expected to impact Bobolinks as their habitat is not forest-
26 dependent.

27
28 **Canada Warbler (*Cardellina canadensis*) - Special Concern** - The brightly coloured
29 Canada warbler is widespread throughout the forested parts of Ontario. The Atlas
30 estimated that there were 900,000 Canada Warblers in Ontario (2001-2005) before it
31 was listed as "special concern" in 2012. As of February 2021, LIO and eBird both
32 recorded Canada Warbler on the Kenora Forest.

33
34 The habitat of this warbler seems to vary across its range in Canada but is generally
35 described as moist, mixed coniferous-deciduous forest with a well-developed [shrubby]
36 understory. The Canada warbler eats spiders and insects, and it may be a “spruce
37 budworm associate” whose population responds positively to outbreaks of the spruce
38 budworm, because population declines and levels of the Canada Warbler in Ontario and
39 elsewhere in its North American range seem to parallel population levels of the
40 budworm, at least when assessed at a very large scale (province or state). The nest is

1 placed on or near the ground, often in stumps or fallen logs. Since the species inhabits
2 mature and older forest, it could be negatively affected by forest harvesting.

3
4 In this FMP, the needs of the Canada warbler will be met by providing habitat using the
5 coarse filter approach described above (specifically by providing a natural amount of
6 mature and older mixedwood and conifer mixedwood forest), and also by following the
7 CRO for songbird nests if a nest is discovered during the course of operations (Section
8 4.2.2.2 Conditions on Regular Operations).

9
10 **Chimney Swift (*Chaetura pelagica*) – Threatened** – The Chimney Swift has a dark
11 cylindrical body with a short tail, long and narrow crescent-shaped wings, a very small
12 bill, and a large mouth. Swifts are superb fliers, and spend most of the day foraging for
13 insects on the wing. Because of their very short legs, they cannot perch, but cling to the
14 walls of chimneys or tree cavities. They used to nest and roost in hollow trees, but they
15 have almost completely adapted to man-made structures, in particular chimneys. The
16 biggest threat to Chimney Swifts is the loss of breeding and roosting sites. Changes in
17 chimney construction and the move to gas furnaces reduces suitable habitat for
18 breeding and roosting. Also, a general decline in insect populations due to insecticide
19 spraying may be a factor.

20
21 As of February 2021, LIO and eBird both recorded Chimney Swift on the Kenora Forest.

22
23 Forestry operations on the Kenora Forest are not expected to impact chimney swift
24 habitat. Should Chimney Swift nests be encountered, the needs of the Chimney Swift
25 will be met by applying an AOC prescription N13 (Table FMP-11).

26
27 **Common Nighthawk (*Chordeiles minor*) - Special Concern** - The common
28 nighthawk is widely distributed in North and South America but was listed as “at risk” in
29 Ontario owing to an apparent widespread population decline. The geographic range
30 covers the entire province, and it is a regular inhabitant of the Kenora Forest. The LIO
31 database and citizen science programs such as eBird indicate presence on the forest
32 where habitat is suitable.

33
34 The Common Nighthawk is an "aerial insectivore" that hunts for insects while in flight.
35 COSEWIC states that nesting occurs on bare rock or mineral soil, mine tailings, in peat
36 bogs, marshes, on flat gravel roofs, in pastures, burns, and in cutovers (COSEWIC
37 2007); there is no built up nest structure. Population decline may be due to mosquito
38 control programs in other areas, replacement of gravel roofs with tar-covered roofs,
39 more intensive agriculture, or fire suppression that reduces the area of exposed ground
40 resulting from severe fires (COSEWIC 2007). Generally, forest management that

1 creates openings and younger forest conditions is thought to be beneficial to the
2 nighthawk.

3

4 In this FMP, the needs of the Common Nighthawk will be met by providing habitat using
5 the coarse filter approach described above (specifically by creating recent disturbances
6 through forest harvesting), and also by applying an AOC prescription around nesting
7 habitat (Table FMP-11, AOC N16).

8

9 **Eastern Meadowlark (*Sturnella magna*) – Threatened -**

10 The Eastern Meadowlark is a medium-sized, migratory songbird (about 22 to 28
11 centimetres long) with a bright yellow throat and belly, a black "V" on its breast and
12 white flanks with black streaks. Their backs are mainly brown with black streaks.
13 Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures
14 and hayfields, but are also found in alfalfa fields, weedy borders of croplands,
15 roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small
16 trees, shrubs or fence posts are used as elevated song perches.

17

18 This species increased when forests were cleared in eastern North America. However,
19 as with many grassland birds, Eastern Meadowlark numbers are shrinking due to
20 changes in land use and the loss of suitable habitat that has resulted from development,
21 changes in farming practices, over-grazing of pasturelands by livestock, grassland
22 fragmentation, reforestation and the use of pesticides. Eastern Meadowlarks are also
23 subject to predators, including foxes, domestic cats and dogs, coyotes, snakes, skunks,
24 raccoons and other small mammals. In Ontario, the number of Eastern Meadowlarks
25 has decreased by almost 65 per cent during the past 40 years.

26

27 LIO and eBird record sites and observations on the Kenora Forest near Morson in the
28 south Lake of the Woods area. Forestry operations on the Kenora Forest are not
29 expected to impact Eastern Meadowlarks as their habitat is not forest-dependent.

30

31 **Eastern Whip-poor-will (*Caprimulgus vociferus*) - Threatened -** The Eastern Whip-
32 poor-will is an aerial insectivore that is more often heard than seen. It eats mainly
33 moths and beetles. It is well camouflaged when it roosts by day parallel to the branch on
34 which it sits, but its distinctive call is given loudly and is “almost endlessly repeated”
35 during twilight hours or in bright moonlight. The species has experienced a large decline
36 (>50%) in Ontario and elsewhere. The main threat to this species is considered
37 agricultural expansion and intensification of wintering ground and reduced availability of
38 insect prey as associated with levels of pesticide use. Forest management is
39 considered a low level of concern.

40

1 The Whip-poor-will has been identified on the forest from NDMNRF surveys, which are
2 recorded in LIO. eBird also has recent observations. The Ontario Breeding Bird Atlas
3 describes habitat as "rock or sand barrens with scattered trees, savannahs, old burns in
4 a state of early succession, and open conifer plantations", and COSEWIC describes its
5 nesting habitat as "most types of forest at early stages of succession". The whip-poor-
6 will lays its eggs directly on leaf litter on the ground, often in the shade of a shrub or
7 small tree- there is no built up next structure. The foregoing suggests the whip-poor-will
8 is more likely benefited than harmed by forestry which creates younger, open forest
9 conditions.

10
11 In this FMP, the needs of the Eastern Whip-poor-will will be met by providing habitat
12 using the coarse filter approaches described above (specifically by creating young and
13 immature forest stands through forest harvesting), and also by applying an AOC
14 prescription (Table FMP-11, AOC N20). Implementation of the AOC prescription is
15 intended to protect occupied breeding territories/nesting sites and is not focused on a
16 specific known location of an occupied nest as actual nests are rarely found, and nest
17 searches are not encouraged due to the likelihood of damaging the nest/offspring
18 (General Habitat Description for the Eastern Whip-poor-will).

19
20 **Eastern Wood-pewee (*Contopus virens*) - Special Concern** - The eastern wood-
21 pewee is a small songbird that lives in the mid-canopy layer of forest clearings and on
22 the edges of deciduous and mixed forests. It is also an aerial insectivore. The Ontario
23 Breeding Bird Atlas noted that its preference for open spaces near the nest is often
24 provided by forest edges, clearings, roadways, and water. It is most abundant in
25 intermediate-age forest stands with little understory vegetation. LIO and eBird record
26 presence on the forest where habitat is suitable. The eastern wood-pewee is an aerial
27 insectivore, and the COSEWIC status report stated that its decline might have been
28 caused by factors on the winter range or in migration where it spends most of the year,
29 or by a widespread decline in the supply of flying insects. The wood-pewee is not
30 thought to be particularly sensitive to forest management.

31
32 In this FMP, the needs of the Eastern Wood-pewee will be met by providing habitat
33 using the coarse filter approach described above (specifically by creating young and
34 immature forest stands through forest harvesting), and also by following the CRO for
35 songbird nests if a nest is discovered during the course of operations (Section 4.2.2.2
36 Conditions on Regular Operations).

37
38 **Evening Grosbeak (*Coccothraustes vespertinus*) – Special Concern** – The Evening
39 Grosbeak is found across Canada. It breeds in coniferous forests and may be found in
40 mature mixed-wood forests dominated by fir species, white spruce and trembling aspen.

1 Their main prey is spruce budworm, and abundance of Evening Grosbeak is linked to
2 the abundance of the spruce budworm. Other times of year, the species consumes
3 seeds, mostly from fir and spruces but also from garden feeders. Evening Grosbeaks
4 are often found along roadsides.

5
6 LIO identifies confirmed breeding in the Kenora Forest. Citizen science programs such
7 as eBird also indicate presence on the forest where habitat is suitable.

8
9 In this FMP, the needs of the Evening Grosbeak will be met by providing habitat using
10 the coarse filter approach described above and also by following the CRO for songbird
11 nests if a nest is discovered during the course of operations (Section 4.2.2.2 Conditions
12 on Regular Operations).

13
14 **Golden Eagle (*Aquila chrysaetus*) – Endangered** - The Golden Eagle inhabits vast
15 open areas such as grasslands and tundra where it hunts for mammals. It constructs its
16 own large nest from sticks usually on a cliff, or an open slope. The Ontario Breeding
17 Bird Atlas shows Golden eagle nesting primarily occurring in the Hudson Bay Lowlands.
18 There is a low probability that Golden Eagles would nest in the Kenora Forest, but there
19 has been a single sighting with a bald eagle in eBird (and recorded in LIO), and these
20 eagles may be observed migrating through the area to northern nesting areas.

21
22 Forestry operations in the Kenora Forest are unlikely to affect golden eagles directly,
23 because nesting in this area is not likely.

24
25 **Golden-winged Warbler (*Vermivora chrysoptera*) – Special Concern** - The Golden-
26 winged Warbler is a small warbler measuring 11 cm long. It is distinguishable by its grey
27 back, white belly, yellow forehead and a yellow patch on its wings. This is the only
28 warbler with both a yellow patch on its wings and a black throat (grey in females).
29 Golden-winged Warblers breed in tangled, shrubby habitats such as regenerating
30 clearcuts, wet thickets, and tamarack bogs. In their breeding areas, Golden-winged
31 Warblers seem to be fond of regeneration zones where young shrubs grow, surrounded
32 by mature forest, and characterized by plant succession of 10 to 30 years. The warblers
33 frequent clusters of herbaceous plants and low bushes (where they place their nests,
34 which are built on the ground). They often move into nearby woodland when the
35 young have fledged. They spend winters in open woodlands and shade-coffee
36 plantations of Central and South America.

37
38 LIO has a record, however there is a low probability of occurrence of Golden-Winged
39 Warblers in the Kenora Forest. eBird does not have any recorded observations.

40



1 In this FMP, the needs of the Golden-winged Warbler will be met by providing habitat
2 using the coarse filter approaches described above (specifically by creating young and
3 immature forest stands through forest harvesting), and also by following the CRO for
4 songbird nests if a nest is discovered during the course of operations (Section 4.2.2.2
5 Conditions on Regular Operations).

6
7 **Horned Grebe (*Podiceps auritus*) – Special Concern** - is a small duck-like water bird
8 31-38 cm long with a short, pointed bill. In breeding plumage, the Horned Grebe has a
9 black head with a distinctive patch of golden yellow feathers behind its eye called
10 “horns.” The front of its neck and upper breast are reddish. Males and females look
11 similar, although males are typically brighter than females in breeding plumage. The
12 Horned Grebe usually nests in small ponds, marshes and shallow bays that contain
13 areas of open water and emergent vegetation. Nests are usually located within a few
14 metres of open water. This vegetation provides adults with nest materials, concealment,
15 and protection for their young. The Horned Grebe occupies natural habitat more often
16 than man-made reservoirs and artificial ponds. It is not known why the Horned Grebe is
17 declining across North America. It is expected that populations are threatened by the
18 permanent loss of wetlands to agriculture and development, possibly resulting from
19 drought.

20
21 LIO and eBird record observations of the Horned Grebe near Morson in the south Lake
22 of the Woods area, however it is relatively uncommon on the Kenora Forest. Habitat is
23 not forest dependent so it is improbable that forestry operations on the Kenora Forest
24 will negatively impact the Horned Grebe. This species is not forest-dependent, but if a
25 nesting site is found, the AOC W06 prescription will be applied (Table FMP-11).

26
27 **Least Bittern (*Ixobrychus exilis*) - Threatened** – In Ontario, the Least Bittern is found
28 in a variety of wetland habitats, but strongly prefers cattail marshes with a mix of open
29 pools and channels. The Least Bittern builds its nest above the water in stands of
30 dense wetland vegetation. This tiny bittern eats mostly frogs, small fish, and aquatic
31 insects

32
33 LIO has a record, however there is a low probability of occurrence of Least Bittern in the
34 Kenora Forest. eBird does not have any recorded observations. The species is not
35 likely to be negatively affected by forest management because it nests in marshes.

36
37 In this FMP, the needs of the Least Bittern will be met by providing habitat using the
38 coarse filter approaches described above, and by applying (i) a CRO to wetlands that
39 could be used for nesting by the species (Section 4.2.2.2 Conditions on Regular

1 Operations), and (ii) an AOC prescription around ground wetlands that are known to be
2 occupied by Least Bitterns (Table FMP-11, AOC W06).

3
4 **Olive-sided Flycatcher (*Contopus cooperi*) - Special Concern** - The Olive-sided
5 Flycatcher is widely but sparsely distributed in Ontario with only ~100,000 thought to
6 occur in the province, according to the Ontario Breeding Bird Atlas. There have been
7 numerous observations of Olive-sided Flycatcher in eBird, however no locations are
8 recorded in LIO. The Ontario Breeding Bird Atlas (2001-2005) identifies likely breeding
9 in the Kenora Forest.

10
11 This aerial insectivore forages in the open from a high perch where it darts out to
12 intercept flying insects and then returns to the same perch. Habitat is described as open
13 areas that may include forest openings, forest edges near natural openings (such as
14 rivers, muskeg, bogs or swamps), recently harvested areas, and burns in coniferous or
15 mixed forest with tall trees or snags for perching. Thus, forest management that results
16 in openings with residual wildlife trees that can act as perches is likely to benefit the
17 Olive-sided Flycatcher.

18
19 In this FMP, the needs of the Olive-sided Flycatcher will be met by providing habitat
20 using the coarse filter approach described above (including recently disturbed and
21 regenerating coniferous forest stands, and creating forest openings in conifer stands
22 that contain unharvested wildlife trees and residual patches), and by following the CRO
23 for songbird nests if a nest is discovered during the course of operations (Section
24 4.2.2.2 Conditions on Regular Operations).

25
26 **Peregrine Falcon (*Falco peregrinus*) - Special Concern** – The Peregrine Falcon is
27 Ontario's best known Species at Risk, owing to efforts spanning over two decades by
28 the Ontario Ministry of Natural Resources, Canadian Wildlife Service, the private sector,
29 and naturalists and other volunteers to re-establish a breeding population in the
30 province. The Peregrine Falcon is a streamlined flier renowned for its ability to dive at
31 speeds of up to 300 km/hour as it "stoops" on its prey, literally knocking the birds out of
32 the air. The adult Peregrine is best identified by its distinctive black facial mask,
33 resembling a helmet, and by its black malar stripe, or "moustache". It has a slate blue-
34 grey back and whitish underparts with fine, dark barring on the thighs and lower breast.
35 As with most birds of prey, the female is substantially larger than the male.

36
37 In the wild, Peregrine Falcons usually nest on tall, steep cliff ledges adjacent to large
38 waterbodies, but some birds adapt to urban environments and raise their young on
39 ledges of tall buildings, even in densely populated downtown areas. The Atlas of the
40 Breeding Birds of Ontario has records of only two Peregrine Falcons nesting sites:

1 along Lake Superior and in Southern Ontario, however there must be more unrecorded
2 nest locations to support the population in the region.

3 There are no documented nesting areas on the Kenora Forest, though numerous
4 sightings of this bird have occurred in the area (LIO, eBird). The last reported nesting
5 site on the Kenora Forest was in the 1940s in the Minaki / Thompson Lake area. If a
6 Peregrine Falcon nesting site is found on the Kenora Forest, the *Endangered Species*
7 *Act* will be followed and an appropriate AOC prescriptions developed and applied.

8
9 **Piping Plover (*Charadrius melodus*) – Endangered** - The Piping Plover is a small
10 sand-coloured, sparrow-sized shorebird that nests and feeds along coastal sand and
11 gravel beaches in North America. The adult has yellow-orange legs, a black band
12 across the forehead from eye to eye, and a black ring around the neck. It typically runs
13 in short starts and stops. The bird's name is derived from its plaintive bell-like whistles
14 which are often heard before the bird is visible.

15
16 Piping Plovers nest exclusively on dry sandy or gravelly beaches just above the reach
17 of high water and waves. When not migrating, this bird spends virtually all of its time
18 between the water's edge and the back of the beach. It pecks the sand and searches
19 small pools of water for food - mostly insects and small crustaceans.

20
21 The Piping Plover is protected by the Federal *Species at Risk Act* and Ontario's
22 *Endangered Species Act*. The Piping Plover is known to exist in the Kenora Forest
23 (eBird, LIO record for area near Morson in the south Lake of the Woods area). Risk of
24 impact through forest management activities is low. They do not occupy forested
25 habitats and are not likely to be affected by forest management operations. Birds live in
26 close proximity to water.

27
28 In this FMP, there is no expectation that forest management activities will impact Piping
29 Plover. The only occurrence of this species on the Kenora Forest is a provincial park in
30 the southern portion of Lake of the Woods.

31
32 **Red-Headed Woodpecker (*Melanerpes erythrocephalus*) - Special Concern** - The
33 Red-headed Woodpecker is a medium-sized bird – about 20 centimetres long – easily
34 recognized for its vivid red head, neck and breast. The rest of the bird is black and
35 white, mostly white underneath and black on top. This woodpecker's strong bill helps it
36 dig holes in wood to find insects, its food source in the summer. In the winter, it eats
37 nuts. Adults often return to the same nesting site year after year. Between May and
38 June, females lay from three to seven eggs. Both parents incubate the eggs and then
39 tend to the young.

40



1 The Red-headed Woodpecker lives in open woodland and woodland edges, and is
2 often found in parks, golf courses and cemeteries. These areas typically have many
3 dead trees, which the bird uses for nesting and perching. This woodpecker regularly
4 winters in the United States, moving to locations where it can find sufficient acorns and
5 beechnuts to eat. A few of these birds will stay the winter in woodlands in southern
6 Ontario if there are adequate supplies of nuts. Red-headed Woodpecker populations
7 have declined by more than 60 per cent in Ontario in the last 20 years because of
8 habitat loss. The removal of dead trees in which they nest is also believed to be a threat
9 to these birds.

10
11 Occurrence of the Red-Headed Woodpecker is likely in the Kenora Forest as
12 observations are recorded in eBird for the area (no record in LIO). In this FMP, the
13 needs of the Red-Headed Woodpecker will be met by providing habitat using the coarse
14 filter approach described above, and also by: (i) retaining unharvested stands of mature
15 trees near shorelines through AOC prescriptions (Table FMP-11) for water quality
16 (AOCs W01-W08), tourism (several AOCs labelled like “Txx”) and/or archaeological
17 potential areas (AOC A01).

18
19 **Short-eared Owl (*Asio flammeus*) - Special Concern** - This medium-sized owl
20 inhabits open grassy areas, marshes, meadows, and regenerating clearcuts and burns
21 where it hunts for small mammals. It nests on the ground. There is one observation of
22 the Short-eared Owl in LIO and no observations recorded in eBird. There are no known
23 nesting sites. Since this owl sometimes nests in young, open, regenerating forests, the
24 species may benefit from forest management activities that create suitable conditions
25 for nesting.

26
27 In this FMP, the needs of the Short-eared Owl will be met by providing habitat using the
28 coarse filter approach described above (specifically by creating open conditions and
29 young forest through forest harvesting), and by applying (i) a CRO to wetlands that
30 could be used for nesting by the species (Section 4.2.2.2 Conditions on Regular
31 Operations), and (ii) an AOC prescription around ground nests that are occupied by the
32 species (Table FMP-11, AOC N14).

33
34 **Wood Thrush (*Hylocichla mustelina*) – Special Concern** - The Wood Thrush is a
35 medium-sized songbird, about 20 cm long – slightly smaller than the American robin
36 and similar in shape. These birds are generally rusty-brown on the upper parts with
37 white under parts and large blackish spots on the breast and sides. The wood thrush
38 forages for food in leaf litter or on semi-bare ground. Its prey includes larval and adult
39 insects as well as plant material. In Canada, the Wood Thrush nests mainly in second-
40 growth and mature deciduous and mixed forests, with saplings and well-developed

1 understory layers. This species prefers large forest mosaics, but may also nest in small
2 forest fragments. Wintering habitat is characterized primarily by undisturbed to
3 moderately disturbed wet primary lowland forests. There have been numerous
4 sightings of Wood thrush in the Kenora Forest (LIO, eBird), and breeding in the Kenora
5 Forest is likely.

6
7 In this FMP, the needs of the Wood Thrush will be met by providing habitat using the
8 coarse filter approaches described above (specifically by providing a natural amount of
9 mature and older mixedwood and conifer mixedwood forest), and also by following the
10 CRO for songbird nests if a nest is discovered during the course of operations (Section
11 4.2.2.2 Conditions on Regular Operations).

12
13 **Yellow Rail (*Coturnicops noveboracensis*) - Special Concern** – The Ontario
14 Breeding Bird Atlas shows that there are only a few widely distributed nest records of
15 this small, quail-like, elusive, wetland-dwelling bird in Ontario. Observations range from
16 the extreme south to the north in Ontario, and from the east to the west. The species
17 prefers wetlands dominated by grasses, rushes, and sedges where there is moist
18 ground with shallow or no standing water throughout the nesting season. The nest is
19 built on the ground and is usually overtopped by dead vegetation from the previous
20 year, making the nest very difficult to see.

21
22 Yellow rail nesting habitat could potentially be affected by road building activities in the
23 Kenora Forest. LIO and eBird record observations of Yellow Rail in the Kenora Forest
24 near Morson in the south Lake of the Woods area.

25
26 In this FMP, the needs of the Yellow Rail will be met by providing habitat using the
27 coarse filter approach described above, and by applying (i) a CRO to wetlands that
28 could be used for nesting by the species (Section 4.2.2.2 Conditions on Regular
29 Operations), and (ii) an AOC prescription around ground wetlands that are known to be
30 occupied by Yellow Rails (Table FMP-11, AOC W06).

31 32 **b) Mammals**

33
34 **American Badger (Northwestern Ontario population)(*Taxidea taxus*) -**
35 **Endangered** – The American Badger prefers open areas and may also frequent
36 brushlands with little groundcover. When inactive, badgers occupy underground
37 burrows. Badgers are basically solitary animals, though home ranges may
38 overlap. There is one record of American badger on the adjacent Red Lake Forest, so
39 their occurrence is also possible on the Kenora Forest. Should an American Badger be
40 observed on the forest, an AOC to protect their den site will be developed.

1
2 **Cougar (*Puma concolor*) – Endangered** - The cougar has been confirmed in southern
3 Manitoba, and the Kenora area in Northwestern Ontario (LIO). The carcass of an adult
4 male was found in the spring of 2017 near Thunder Bay. Although cougar sightings are
5 occasionally reported, they are difficult to confirm. The cougar is a habitat generalist
6 and deer are its preferred prey. Forest harvesting that creates conditions suitable for
7 deer would benefit the cougar. The FMP contains an AOC prescription for cougar dens
8 (Table FMP-11, AOC D03).

9
10 **Gray Fox (*Urocyon cinereoargenteus*) – Threatened** – Gray Fox are extremely rare
11 and have not been reported on the Kenora Forest but from time to time are reported
12 south and east of the management unit. iNaturalist sighting in the English River Forest
13 in 2020. The Gray Fox lives in forests and marshes and have the unique ability of
14 climbing trees, scrambling up steep trunks and then jump from branch to branch. The
15 Gray Fox is a southern species that is more common in the United States, and may
16 demonstrate an increase in its range due to climate change. The Gray Fox is not
17 expected to be encountered during forestry operations on the Kenora Forest.

18
19 There are no known denning sites at this time, however should a denning location be
20 identified during the course of implementation of this FMP, the FMP contains an AOC
21 prescription for Gray Fox dens (Table FMP-11, AOC D02).

22
23 **Little Brown Myotis (*Myotis lucifugus*) - Endangered** - This small, forest-dwelling bat
24 was formerly common across Ontario from the extreme south to at least Moose Factory.
25 Range maps suggest there is no doubt that the species occurs throughout the Kenora
26 Forest (LIO). However, since 2010 a fungus (*Pseudogymnoascus destructans*) has
27 caused a disease known as "white nose syndrome" in bats hibernating in caves and old
28 mines in Ontario, and the disease has spread recently into northwestern Ontario from its
29 first sighting in New York State in 2006. The disease disrupts the hibernation cycle of
30 bats and has caused extremely high mortality of overwintering populations in the
31 hibernacula in Ontario that have been monitored by NDMNRF. For that reason the
32 species was listed by COSSARO as endangered. Ontario has developed a "*White Nose
33 Syndrome Response Plan*". The species hibernates in caves and old mines, hunts for
34 insects over water and through the forest, and creates maternal colonies in trees and
35 rock crevices. The NDMNRF database suggests there are many abandoned mines with
36 shafts (vertical tunnels) and adits (horizontal tunnels) within the boundaries of the
37 Kenora Forest. These could provide hibernation sites for the little brown bat. Roosting
38 bats or maternal colonies could be encountered during forest management activities in
39 the Kenora Forest.

40



1 In this FMP, the needs of the Little Brown Myotis will be met by providing habitat using
2 the coarse filter approach described above, and also by applying AOC prescriptions for
3 bat hibernacula and bat roosting sites (Table FMP-11, AOCs M05 and M06).

4
5 **Northern Myotis (Northern Long-eared Myotis) (*Myotis septentrionalis*) -**
6 **Endangered** – LIO records that Northern (bats) occur in the Kenora Forest. Like the
7 Little Brown Myotis (see above), the Northern Myotis was listed as endangered in
8 Ontario because of a major population decline attributed to white nose syndrome. The
9 species hibernates in old mines and caves, hunts for insects under the forest canopy
10 and along forest edges, especially near water, uses tree cavities for roosting and
11 maternal colonies, and also roosts under loose bark. Bats using roosting sites and
12 maternal colonies could be encountered during forest management operations in the
13 Kenora Forest.

14
15 In this FMP, the needs of the northern long-eared myotis will be met by providing habitat
16 using the coarse filter approach described above, and also by applying AOC
17 prescriptions for bat hibernacula and bat roosting sites (Table FMP-11, AOCs M05 and
18 M06).

19
20 **Wolverine (*Gulo gulo*) - Threatened** - The wolverine is a stocky, powerful, medium-
21 sized scavenger and predator with large paws and a long bushy tail. It is the largest
22 member of the weasel family. Wolverines usually live alone and roam in search of food
23 across large territories that vary from 500 to 1500 square kilometers or more in size in
24 boreal forest and tundra. The wolverine's heavy skull enables it to crush and eat frozen
25 carcasses and bones from moose and caribou. Because carrion is an important food,
26 wolverines are sometimes trapped accidentally in traps set with bait for other species.
27 Females build dens under snow-covered boulders, fallen logs, and occasionally in snow
28 drifts. Researchers are still learning about the ecology and habitat needs of the
29 wolverine in Ontario.

30
31 In recent years, reports of wolverines being sighted in the area have become much
32 more common (LIO). There have been many sightings by NDMNRF staff and members
33 of the public, additionally local trappers have encountered wolverines accidentally
34 caught in their traps in recent years. COSSARO's most recent review suggests the
35 number of observations of wolverines in Ontario has increased greatly since the first
36 status review. NDMNRF estimates there are now several hundred wolverines in
37 Ontario. Wolverine dens could be encountered during forest management operations.

38

1 In this FMP, the needs of the wolverine will be met by providing habitat using the coarse
2 filter approach described above. This FMP also contains an AOC prescription for
3 known Wolverine dens (Table FMP-11, AOC D05).

4
5 **Woodland Caribou – Boreal population (*Rangifer tarandus caribou*) – Threatened**
6 Woodland Caribou are native to Ontario’s northern forests. They are an important
7 indicator of the healthy boreal forest ecosystem on which they rely. As one of several
8 jurisdictions responsible for managing the northern Boreal Forest, Ontario has an
9 important role in Caribou stewardship.

10
11 All caribou in Canada are of the same species, *Rangifer tarandus*, and are reported to
12 be the most abundant ungulate in Canada (Canadian Cooperative Wildlife Health
13 Centre 2005). Within Canada, there are a number of distinct subspecies or ecotypes
14 that receive consideration based on their unique geography, physiology and
15 behaviour.

16
17 Ontario’s caribou are all members of the caribou subspecies, but two distinct
18 populations have been identified: Boreal and migratory. These populations differ mainly
19 in their behaviour (the tendency to migrate from the forest to the tundra or to remain
20 within the forest). Only boreal woodland caribou occurs within the northern portion of
21 the Kenora Forest and is listed as ‘threatened’ under Ontario’s Endangered Species
22 Act. The 2019 Amended federal Recovery Strategy indicated that 5 of the 9 identified
23 local populations of boreal woodland caribou in Ontario are considered to be self-
24 sustaining with only 15 out of 51 local populations throughout Canada receiving this
25 same designation.

26
27 In a status report prepared for MNRF, Harris (1999) provided population estimates. The
28 status report stated that in 1996 there were about 21,000 caribou in Ontario (all of the
29 “woodland caribou” subspecies). This population included about 5,000 of the threatened
30 “Boreal ecotype” (listed as “at risk” federally in 2002 and provincially in 2004), with the
31 remainder (about 16,000) being the forest-tundra ecotype (Harris 1999), which has
32 been listed by COSEWIC in 2017 as “endangered.” The forest-tundra ecotype overlaps
33 much of the Southern Hudson Bay population of the federal Eastern Migratory
34 designatable unit, which was estimated to have declined to approximately 12,479
35 mature individuals in 2016 but where more marked declines have occurred with the
36 George River and Leaf River herds in northern Labrador and Quebec.

37
38 The geographic range of caribou in Ontario has receded northward since the late
39 1800s. Several factors have been hypothesized to have had a role including hunting,
40 wildland fires, land clearing, logging, and increased predation by wolves due to

1 increased populations of moose and deer. Hunting of caribou by non-Indigenous
2 people has been banned in Ontario since 1929. Another influence on caribou is a
3 parasitic nematode (*Parelaphostrongylus tenuis*) commonly called the “brain worm” that
4 is carried by deer. Although deer are not seriously affected, the parasite can cause
5 death to infected caribou and moose. When deer invade moose and caribou habitat,
6 the frequency of transmission of this parasite is increased.

7
8 Specific management actions have been undertaken for caribou in this forest since a
9 draft version of the “*Forest Management Guidelines for the Conservation of Woodland*
10 *Caribou – a Landscape Approach*” (Racey et al.1999) was first applied. The 2022-2032
11 FMP will be the fourth plan for this forest to address caribou habitat management
12 explicitly, now following direction in the *Forest Management Guide for Boreal*
13 *Landscapes* (MNRF, 2014).

14
15 In winter, caribou use open coniferous forest with abundant terrestrial or arboreal
16 lichens (Racey et al. 1999). Refuge habitat, consisting of a variety of ages of conifer-
17 dominated stands, is also important for caribou (Racey et al. 1999). Refuge habitat is
18 habitat unlikely to support large numbers of alternate prey species suitable for large
19 predators. It consists of immature and older shallow conifer, jack pine dominated
20 conifer upland, spruce-dominated mixedwood, and all ages of lowland spruce.

21
22 The spatial caribou-related objective of the Boreal Landscape Guide is to provide a
23 sustainable supply of connected, suitable year round caribou habitat and to protect
24 sensitive sites, such as calving sites. The Boreal Landscape Guide requires that forest
25 management units that are within or intersect the continuous distribution of caribou,
26 must follow direction provided in *Ontario’s Woodland Caribou Conservation Plan*. To
27 apply the caribou habitat management direction spatially, NDMNRF identified calving
28 sites and ecologically-based caribou habitat tracts in the Kenora Forest and adjacent
29 management units. Dynamic Caribou Habitat Schedule blocks that are based on the
30 habitat tracts have also been identified to assist in scheduling forest harvesting, and to
31 maintain a continuous supply of connected habitat in suitably large patches.

32
33 *Ontario’s Woodland Caribou Conservation Plan* provides policy direction for the
34 management and recovery of Woodland Caribou (Boreal population), and will apply to
35 the areas of continuous and discontinuous distribution. In this FMP, the caribou habitat
36 guidelines are used to assess caribou habitat spatially through application of the
37 dynamic caribou habitat schedule (DCHS, previous referred to as the “caribou mosaic”),
38 and habitat relationships defined in the guidelines are also used in non-spatial habitat
39 supply modelling performed within SFMM. The supply of caribou habitat was measured
40 non-spatially in SFMM, treating habitat as an ecological constraint and a test of the

1 sustainability of the overall Long-term Management Direction. Both winter combined
2 habitat and refuge habitat were modelled over a 160 year period under the LTMD and
3 analyzed for the short-term in Ontario's Landscape Tool (see Table FMP-7 and Section
4 3.7.0.3 Habitat for Species at Risk and Selected Wildlife Species.

5
6 The objective for forest management planning in the continuous caribou distribution is to
7 maintain a continuous supply of suitable, mature, year-round habitat distributed both
8 geographically and temporally, supporting and ensuring permanent range occupancy.
9 The caribou range which overlaps the Kenora Forest is known as the Sydney Range.

10
11 NDMNRF has completed Integrated Range Assessments for ranges in the continuous
12 caribou distribution. The Integrated Range Assessments are based on population and
13 habitat states; population state includes population size, which was determined using
14 minimum animal count and population trend, which was calculated using annual
15 recruitment rates and adult female survival rates, and habitat state was determined by
16 analyzing natural and anthropogenic (human-caused) disturbance as well as the
17 amount and arrangement of habitat.

18
19 The Sydney Range is the smallest caribou range in the province: it is approximately
20 7,500 km² in size. The towns of Red Lake, Balmertown, Cochenour, and Ear Falls are
21 situated in the range and are associated with human infrastructure and a long industrial
22 development history; this portion of the range is considered to be highly and indefinitely
23 disturbed. The minimum animal count for caribou occupying the Sydney Range was
24 determined to be 55 caribou in 2012. The current estimate of trend, based on the 2011
25 and 2012 biological years, using a one-year pooled survival estimate from the Berens
26 and Sydney ranges, suggests the short-term population trend is likely declining ($\lambda =$
27 0.92). At the time of the Integrated Range Assessment of the Sydney Range in 2017 is
28 considered 64% disturbed. Given these results, risk is estimated to be high in the
29 Sydney Range. The condition of the range is insufficient to sustain caribou.

30
31 The implementation of the long-term management direction in this plan is expected to
32 improve caribou habitat in the Sydney Range. Additional discussion of caribou habitat
33 management is included in Supplementary Documentation B – Analysis Package,
34 Appendix 1.

35
36 There are several management objective indicators included in the Boreal Landscape
37 Guide that have been incorporated into this 2022 FMP related to caribou habitat
38 management: young forest patch size by size class, mature and old forest area
39 (amount and pattern), old growth area, caribou refuge and winter habitat (amount and
40 pattern/texture) and the simulated ranges of natural variation used to set desirable

1 levels for these indicators was considered the best available science by the Planning
2 Team and regional advisors. The direction identifies and helps to set landscape mosaic
3 goals and targets for forest composition (forest tree species groups and age classes)
4 and structure (pattern) in forest management plans. The time slice analysis to assess
5 the proportion of online caribou habitat and connectivity of habitat through time is an
6 indicator described in Supplementary Documentation B – Appendix 1 Development of
7 the DCHS. Spatial and non-spatial indicators of caribou habitat amount and
8 pattern/texture (refuge and winter habitats) were analyzed through use of Ontario's
9 Landscape Tool (OLT) with the forest inventory for the Kenora Forest used as a primary
10 input. This methodology used to set desirable levels and analyze spatial and non-
11 spatial results is a significant step forward in forest management as compared to
12 previous FMPs.

13
14 The CFSA includes a section describing forest operations as exempt from Sections 9
15 and 10 of the ESA when all direction in the applicable guides are appropriately
16 implemented (e.g. including AOC's to address SAR habitat). The incorporation of the
17 BLG direction in both FMP strategic planning and AOC development meet the
18 requirements for the ESA exemption.

19
20 Details of the spatial analysis of habitat supply are provided in Supplementary
21 Documentation B – Analysis Package, Appendix 1 Caribou Habitat Analysis and
22 Appendix 5 Boreal Landscape Guide Indicator Analysis.

23
24 **c) Reptiles**

25
26 **Snapping Turtle (*Chelydra serpentina*) - Special Concern** – The snapping turtle is
27 found in the Kenora Forest (LIO records). The snapping turtle inhabits marshes, bogs,
28 swamps, rivers, lakes, or streams with soft, muddy banks or bottoms. This unmistakable
29 turtle is often very large and eats a variety of plants and animals, and scavenges dead
30 animals as well. It is a highly aquatic turtle that seldom leaves water except to migrate
31 or to lay eggs. Egg-laying occurs in sandy or gravelly areas along streams, and
32 sometimes on roadsides, at dam sites and in forestry aggregate pits. Snapping turtles
33 could come into contact with forest management activities when migrating to or from
34 nesting sites or if nesting along roadsides or in forestry aggregate pits.

35
36 “Special Concern” species may not receive specific species or habitat protection.
37 However, in this FMP, the coarse filter approach for riparian and wetland habitat will
38 likely support snapping turtle wetland habitat. Snapping turtle wetland habitat may also
39 indirectly benefit from applying AOCs to protect water quality (Table FMP-11), and a
40 CRO to protect wetlands (Section 4.2.2.2 Conditions on Regular Operations) however

1 the intent of these fine-filter approaches are not specific to SAR protection. This FMP
2 includes an AOC for Snapping Turtle Nesting Habitat (AOC N19), and a Condition on
3 Roads, Landings and Aggregate Pits for identified Snapping Turtle nesting sites in in
4 non-natural habitat (i.e., road embankment) (Section 4.5.9).

5 6 **d) Insects**

7
8 **Monarch Butterfly (*Danaus plexippus*) - Special Concern** - The Monarch Butterfly is
9 a migratory butterfly that ranges widely across North America. Because the larvae
10 (caterpillars) are specialist herbivores on milkweed and spreading dogbane, adults seek
11 out these host plants to lay their eggs. Monarchs are often found on abandoned
12 farmland and roadsides, but also in city gardens and parks. The eastern North
13 American population migrates to Mexico each fall to overwinter at sites in the central
14 mountains.

15
16 The Monarch is a poisonous butterfly. Animals that eat a Monarch get very sick and
17 vomit (but generally do not die). These animals remember that this brightly-coloured
18 butterfly made them very sick and will avoid all Monarchs in the future. The monarch
19 gets its poison (*cardenolide glycosides*) when it is a caterpillar, from eating the
20 poisonous milkweed plant (genus *Asclepias*) while in its larval (caterpillar) stage.

21
22 Survival of the Monarch depends on protection of its overwintering sites in California,
23 Florida, and Mexico. In Ontario, preferred habitat of the monarch is wetlands, burns,
24 and clearcuts where the eggs are deposited on milkweed plants and adults find nectar-
25 producing wildflowers. Forest management is likely more beneficial than harmful to the
26 monarch because it creates open areas for essential food plants.

27
28 Monarch butterflies are found in the Kenora Forest (LIO records, iNaturalist
29 observations). The monarch butterfly does not rely on forest-dependent habitat, but
30 could potentially be impacted by road construction. In this FMP, the needs of the
31 Monarch Butterfly will be met by providing habitat using the coarse filter approach
32 described above (specifically, by using forest harvesting to create open areas and
33 young forest where adult Monarchs can find nectar-producing flowers). A CRO for
34 wetlands will also provide foraging areas for the Monarch Butterfly (Section 4.2.2.2
35 Conditions on Regular Operations).

36
37 **Yellow-banded Bumble Bee (*Bombus terricola*) – Special Concern** – The Yellow-
38 banded Bumble Bee is a forage and habitat generalist, able to use a variety of nectar-
39 producing plants and environmental conditions. The Yellow-banded Bumble Bee has a
40 large range throughout much of Canada and parts of the United States. It can be found

1 in mixed woodlands, particularly for nesting and overwintering, as well as a variety of
2 open habitat such as native grasslands, farmlands and urban areas. Nest sites are
3 often underground in abandoned rodent burrows or decomposing logs. In Ontario, it is
4 still observed but is less common than it was historically after steep declines. Less is
5 known about historical or recent abundance of Yellow-banded Bumble Bee in northern
6 portions of its range. The Yellow-banded Bumble Bee has been observed in the Kenora
7 Forest (LIO, iNaturalist).

8
9 In this FMP, the needs of the Yellow-banded Bumble Bee will be met by providing
10 habitat using the coarse filter approach. If a nest is discovered additional protection in
11 the form of an AOC or CRO may be developed and applied.

12

13 f) Plants

14

15 **Western Silvery Aster (*Symphyotrichum sericeum*) - Endangered** – The Western
16 Silvery Aster has daisy-like flowers that come in various shades of bright pink to deep
17 purple. Leaves of this plant are covered with silky hairs, giving it a silvery appearance.
18 They are found in well-drained soil.

19

20 In Ontario, it is known to grow in two areas in the Rainy River district on the south shore
21 of Lake of the Woods, and on an island in the lake. The Western Silvery Aster inhabits
22 open habitats that are susceptible to succession from other vegetation. Western Silvery
23 Aster is known to occur in the Kenora Forest (LIO and iNaturalist observation records).

24

25 Western Silvery Aster is protected by Ontario's *Endangered Species Act* and the federal
26 *Species at Risk Act*. The habitat of Western Silver Aster is regulated under the ESA,
27 2007. Like most species at risk, the loss and destruction of habitat is a cause of decline
28 of Western Silvery Aster numbers. In particular, shoreline development and off- road
29 vehicles pose threats to this species. Cottage development is a potential threat to the
30 Western Silvery Aster. The risk of impact through forest management activities is low
31 given the locations of the known sites.

32

33 Should Western Silvery Aster be discovered at a new location on the unit, the site
34 conditions, as defined in the regulation, would be avoided or an AOC developed.

35

36 **Showy Goldenrod (Boreal population)(*Solidago speciosa*) – Threatened** – Showy
37 Goldenrod is a large perennial belonging to the aster family. It can grow to two metres in
38 height. It has large, toothed, egg-shaped lower leaves and much smaller more smooth-
39 edged upper leaves. The small yellow flowers form a cylindrical cluster along the upper
40 30 centimetres of the stem in late summer and early fall.

1
2 Showy Goldenrod is a plant of open habitats. In northwestern Ontario, it grows in
3 prairie grassland on a south-facing slope, on shallow soils over bedrock, bordered by
4 jack pine and white pine. Here, the habitat remains in an open condition due to the
5 shallowness of the soil, which is not deep enough for trees and shrubs to become
6 established. In northwestern Ontario, there is a single population of about 1000 plants.
7

8 Showy Goldenrod is protected by the federal Species at Risk Act and Ontario's
9 Endangered Species Act. It receives general habitat protection under the ESA, 2007.
10 The area where it is known to occur is not subject to allocation on the Kenora Forest.
11 Should new populations be discovered, an AOC will be developed.
12

13 **Small-flowered Lipocarpa (*Lipocarpa micrantha*) – Threatened** – The small-
14 flowered lipocarpa is a tiny sedge that grows on periodically submerged, moist sandy
15 shorelines of lakes and rivers. Sedges resemble grasses, but their stems are unjointed
16 and often three-sided. It is most abundant in open, sunny areas with little vegetation.
17 This sensitive plant does not tolerate even slight changes to its habitat, pollution, or
18 competition from other plants. The numerous small flowers of the Lipocarpa are
19 compactly arranged in a spikelet. This plant is an annual which dies at the end of the
20 growing season, and it must produce many seeds in order to survive. Its seeds can lie
21 dormant in the sand for long periods of time, and germinate when conditions are
22 favourable.
23

24 Cottage development, pollution, erosion and vehicle traffic on beaches all pose a threat
25 to species such as the Small-flowered Lipocarpa that require relatively undisturbed
26 sandy shoreline habitats. This species is not forest-dependent. There are several
27 known locations within the Kenora Forest, including a population on Sable Island in the
28 Kenora District. This species is more common in the United States than in Canada.
29 Forestry operations on the Kenora Forest are not in the vicinity of the known location of
30 this plant.
31

32 g) Fish

33

34 **Deepwater Sculpin (*Myoxocephalus thompsonii*) - not listed provincially** but is
35 listed as Special Concern under the Species At Risk Act (not ESA). The Deepwater
36 Sculpin is a freshwater sculpin with an elongate body that lacks scales and has only
37 been recorded with total lengths less than 200 mm. This species is a benthic dweller,
38 most often found in deep, cold, highly-oxygenated water. The primary threats affecting
39 Deepwater Sculpin appear to be degradation of water quality and invasive species
40 invasions. Industrial, urban, and, agricultural developments have reduced the quality of

1 habitat available to this species, posing a significant threat to its continued survival in
2 inland lakes. Deepwater Sculpin population dynamics appear to be closely linked to the
3 dynamics of other fish species.

4
5 The Department of Fisheries and Oceans (DFO) has reported occurrence of this
6 species in the Kenora Forest (no LIO record). Forestry operations on the Kenora Forest
7 are not expected to impact Deepwater Sculpin habitat directly as their habitat is in lakes
8 and is not forest-dependent.

9
10 **Shortjaw Cisco (*Coregonus zenithicus*) - Threatened** - The Shortjaw Cisco (lake
11 herring) is a North-American freshwater whitefish in the salmon family. Adult fish range
12 to about 30 cm (12 in) in length and are silver, tinged with green above and paler below.
13 There is low probability of occurrence of Short-jaw Cisco in the Kenora Forest (no LIO
14 record, no DFO reports). Shortjaw Cisco has been observed in Big Sandy Lake
15 adjacent to the Dryden Forest.

16
17 Forestry operations on the Kenora Forest are not expected to impact Shortjaw Cisco
18 habitat directly as their habitat is in lakes and is not forest-dependent. If Shortjaw Cisco
19 spawning areas are identified, any road construction in the vicinity would include
20 consideration during road planning. NDMNRF District and regional wildlife biologists
21 will be consulted for direction on the acceptable construction design to ensure there is
22 no negative impact on spawning habitat.

23
24 **Silver Chub (*Macrhybopsis storeriana*) – Threatened** - The Silver chub is a relatively
25 large minnow that can grow up to 23 centimetres long. It has a stout and moderately
26 thick body with silver sides, a greyish-green back and silver-white belly. The bottom of
27 the tail is lined in white. At the corners of its mouth there are tiny, fleshy "whiskers"
28 called barbels. Throughout most of its North American range, Silver chub prefers
29 medium to large rivers with substantial current and silt, sand or gravel bottoms, but in
30 Ontario it is only found in the Great Lakes. It is also found in Manitoba in the Red River
31 and lower Assiniboine River. It is usually found in depths between seven and 12
32 metres, and is believed to spawn in May and June in open water areas. It feeds on
33 aquatic insect larvae, crustaceans and mollusks, including Zebra mussels. Threats to
34 the Silver chub may include habitat degradation, changes in water temperature,
35 sediment and nutrient loading, exotic species, changes to food supply and predators.

36
37 LIO contains records and DFO has reported Silver Chub on the Kenora Forest.
38 Forestry operations on the Kenora Forest are not expected to impact Silver Chub
39 habitat directly as their habitat is in lakes and is not forest-dependent.

40

1 **Silver Lamprey (*Ichthyomyzon unicuspis*) – Special Concern** - The silver lamprey is
2 an eel-shaped fish with a sucking disc mouth. Like all lampreys, it does not have jaws or
3 paired fins. Adult silver lampreys range from nine to 39 centimetres long. Adult silver
4 lampreys are parasites. They attach themselves to different host fish species, feeding
5 on flesh and body fluids. They live for 12 to 20 months as parasites before migrating up
6 streams to spawn, then die after spawning. Silver lampreys require clear water so they
7 can find fish hosts, relatively clean stream beds of sand and organic debris for larvae to
8 live in, and unrestricted migration routes for spawning. Their use of different kinds of
9 habitat throughout their lives (rivers for spawning and early development, and lakes for
10 adults) makes them vulnerable to changes in their environment. The Great Lakes -
11 Upper St. Lawrence River population of silver lamprey is of Special Concern due to a
12 variety of threats, including habitat loss and the use of lampricides – chemicals
13 designed to kill lampreys used to control the invasive sea lamprey.

14
15 LIO contains records and DFO has reported Silver Lamprey on the Kenora Forest.
16 Forestry operations on the Kenora Forest are not expected to impact Silver Lamprey
17 habitat directly as their habitat is in lakes and is not forest-dependent.

18
19 **Lake Sturgeon (*Acipenser fulvescens*) – Threatened** – The Northwestern Ontario
20 population of Lake Sturgeon overlaps with the Kenora Forest. LIO contains records and
21 DFO has reported Lake Sturgeon on the Kenora Forest.

22
23 The Lake Sturgeon is Canada's largest freshwater fish species: past records exist of
24 specimens exceeding 2 metres in length and 136 kg in weight, although most mature
25 specimens seen today are much smaller. Like catfish, the Lake Sturgeon is a
26 specialized bottom feeder. It usually inhabits the bottoms of shallow areas of large
27 freshwater lakes and rivers, but migrates each year from early May to late June to swift-
28 flowing water to spawn. Individuals usually return to the same spawning rivers year
29 after year. The decline in numbers witnessed today may result from threats such as the
30 construction of dams, which may disrupt habitat and interrupt spawning movements and
31 timing; habitat degradation resulting from human activities; habitat contamination
32 caused by chemicals, toxins, and fertilizers; and the introduction of non-native species
33 that include competing and predatory fish and plants that may modify habitat.

34
35 Forestry operations on the Kenora Forest are not expected to impact Lake Sturgeon
36 habitat directly as their habitat is in lakes and is not forest-dependent. If Lake Sturgeon
37 spawning areas are identified, any road construction in the vicinity would include
38 consideration during road planning and through the use of the Identified Fish Spawning
39 Areas AOC W08. NDMNRF District and regional wildlife biologists will be consulted for
40 direction on the acceptable construction design to ensure there is no negative impact on
41 spawning habitat.

2.1.4.2 Fish and Wildlife Inventories**2.1.4.2.1 Fisheries Resources and Fish Habitat**

The fisheries resource on the Kenora Forest is diverse as many lakes, rivers and streams are found throughout the area. Stream and pond values are divided into High, Medium or Low Potential Sensitivity (HPS, MPS and LPS) to forest management activities. Lakes and rivers are High Sensitivity to forest management activities. Sites inventoried as HPS sites have one or more of the following characteristics;

- Known to contain fish species that are highly sensitive to perturbations (e.g. lake trout),
- Known to provide components of fish habitat for which there is a high degree of species dependence,
- Known to contain a rare habitants or fish that are species at risk
- Low habitat resiliency
- Identified as significant habitat by specific fisheries management plans.

MPS sites have one or more of the following characteristics;

- Known to contain fish species that are moderately resilient to perturbations (e.g. walleye, northern pike)
- Known to provide components of fish habitat for which there is a moderate degree of species' dependence
- Known to contain habitats or fish that have a limited distribution
- Moderate habitat resiliency

LPS streams or ponds are those sites that do not meet the criteria for an HPS or MPS stream or pond.

There are over 1,700 lakes with a total surface area of approximately 500,000 hectares within the boundaries of Kenora District. There are over 415,000 hectares of water in the Kenora Forest. Lake of the Woods and three major river systems, the English River, Wabigoon River and Winnipeg River systems, which encompass 50% of the total water area of Kenora District.

The major sport and commercial species sought by anglers, tourist industry, commercial and subsistence fishers are: yellow pickerel (walleye), sauger, northern pike, muskellunge, black crappie, smallmouth bass, largemouth bass, yellow perch, lake trout, lake whitefish, and lake sturgeon. In addition to the major commercial and sport species, other species include ling (burbot), bullheads, cisco (lake herring), white sucker, and redhorse suckers.

1 Ontario has many policies in place to ensure that multiple uses of the forest are
2 recognized and accommodated, both within the forest management planning process,
3 and in parallel processes. The Kenora Forest is located within Fisheries Management
4 Zones 4 and 5 and the Fisheries Management Plans for these zones were used in the
5 preparation, and should be referenced for additional detail on fisheries resources.
6

7 Unregulated forest management activities can have detrimental effects on fisheries
8 resources by degrading, harmfully altering, disrupting or destroying fish habitat. The
9 most common negative impacts occur with improper road water crossings which can
10 remove or alter physical cover critical to fish habitat (spawning, rearing habitats) and/or
11 block the migration of fish. To ensure this does not occur on the Kenora Forest, harvest
12 block design and water crossings will follow the prescriptions and conditions outlined in
13 this FMP that were developed using the *Stand and Site Guide*. For example,
14 waterbodies will be assigned AOC prescriptions from Table FMP-11 based on type of
15 water body (i.e. lake, river or stream), potential sensitivity to forest management
16 activities (i.e. high, moderate or low) and slope of surrounding land. Water crossings
17 will be located away from critical fish habitats and appropriate crossings structures
18 (bridge, culvert etc.) will be used to ensure fish migration.
19

20 The prescriptions in this FMP reflect the science-based direction in the provincial Stand
21 and Site Guide. For ecological reasons, the Stand and Site Guide permits harvesting of
22 trees to the shoreline of a waterbody in some cases. The following excerpt from the
23 Stand and Site Guide (Background and Rationale, p. 101) provides the rationale:
24

25 "Shoreline forest is not static. As a consequence of succession and natural
26 disturbance events, such as wildland fires, shorelines in natural landscapes are
27 characterized by a shifting mosaic of young and old forest that, at broad scales,
28 typically reflects the age and/or composition of the surrounding landscape (...).
29 This diversity is exploited by the shoreline-inhabiting wildlife community."
30

31 The Stand and Site Guide explains (pp. 101-108, Background and Rationale document)
32 that some species of wildlife (that could occur in the Kenora Forest) prefer young
33 shoreline forest that cannot be created or maintained on the landscape where fire is
34 suppressed, unless trees are harvested (e.g., American woodcock, alder flycatcher,
35 yellow warbler, common yellowthroat, palm warbler, Wilson's warbler, least weasel,
36 long-tailed weasel, meadow jumping mouse). Also, the Stand and Site Guide
37 concluded that some clearcutting to the shoreline appears to be required to maintain a
38 supply of habitat for the beaver and all the species dependent on beaver ponds (e.g.,
39 many species of waterfowl, amphibians, reptiles, small fish, invertebrates, and others).

1 The AOC prescriptions for water and fish habitat in Table FMP-11 reflect these
2 considerations.

3

4 **Implications of Fisheries Resources** - Fisheries Resources will be considered during
5 area of concern planning for operations adjacent to riparian zones, identification and
6 AOC planning for Fish Spawning Areas AOC W08, as well as during roads planning.
7 The initial land base available for timber production used for the Strategic SFMM
8 modelling was reduced to not include estimated riparian zones in the calculation of the
9 available harvest area for this 10-year period. The quantity and quality of these
10 fisheries resources are not likely to be affected by forest operations

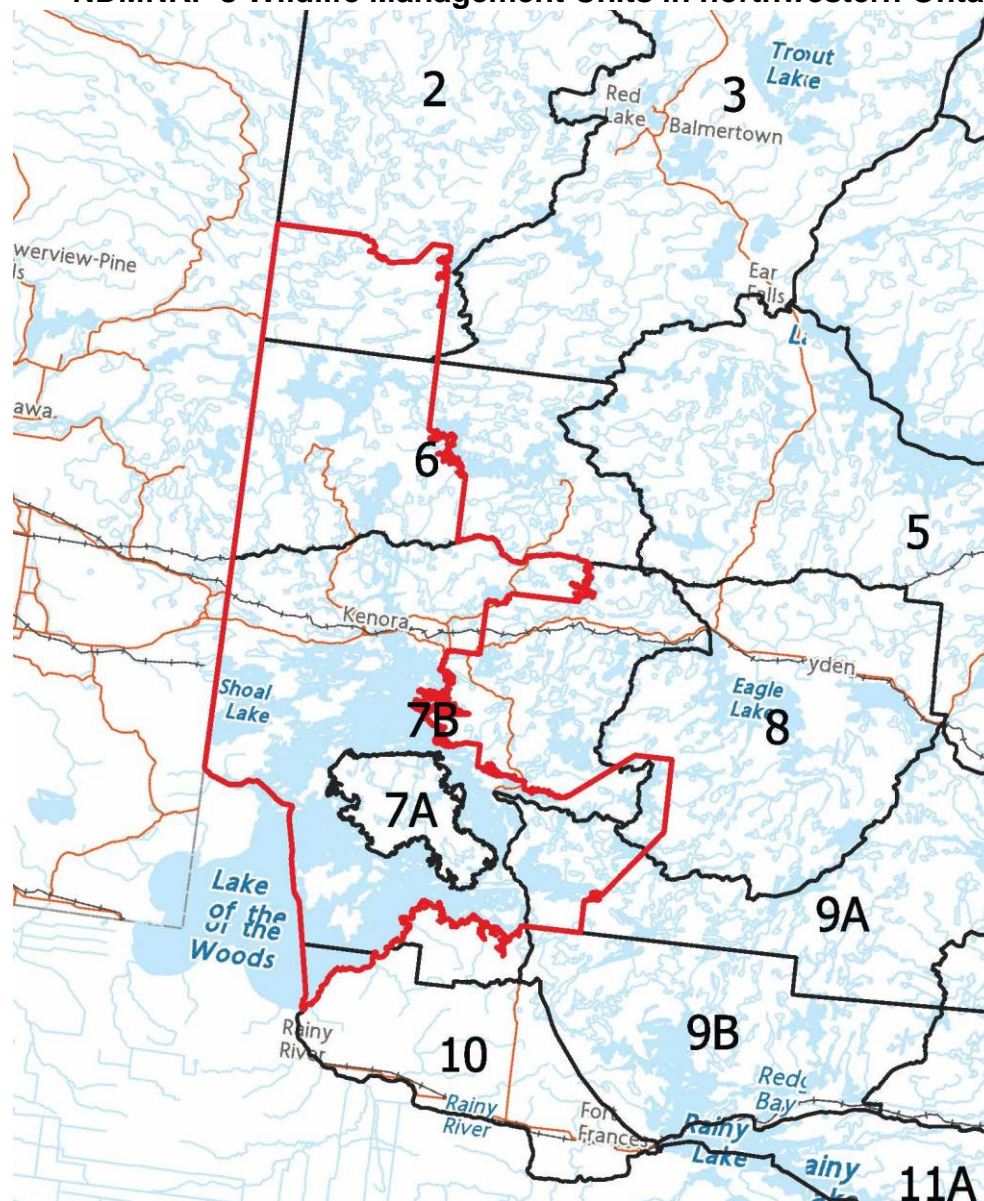
11

12 2.1.4.2.1 Wildlife Resources (other than Species at Risk, Selected Species)

13 The NDMNRF assesses populations of wildlife that are hunted at the level of the Wildlife
14 Management Unit (WMU). The Kenora Forest includes portions of NDMNRF Wildlife
15 Management Units: 2, 6, 7A, 7B, 8 and 9A (Figure 24). The provincial hunting
16 regulations specify where hunting can occur, and how much; this is outside the FMP
17 process. The FMP process provides support for NDMNRF's wildlife habitat
18 management program by creating or protecting habitat as directed by NDMNRF.
19 Harvesting the forest for wood remains a primary management tool to facilitate the
20 production of habitat for species that require recently disturbed, young or immature
21 conditions, and those that require stands dominated by tree species that depend on
22 disturbances to regenerate them (e.g., jack pine, poplar).

23

1 **Figure 24 Location of the Kenora Forest (red outline) with Respect to**
 2 **NDMNRF's Wildlife Management Units in northwestern Ontario**



3
 4
 5 (a) **Moose** – Moose have an important ecological role in the Kenora Forest and
 6 beyond, and are highly valued as game animals. For many years the NDMNRF has
 7 conducted an annual aerial survey for moose that covers randomly selected plots in
 8 provincial WMUs according to a defined protocol. Population estimates are available at
 9 the following website: <https://www.ontario.ca/page/moose-population-management>
 10 The NDMNRF has also developed and tested habitat models that produce population
 11 ranges to inform the NDMNRF wildlife habitat management objective targets. This
 12 information pertaining to the WMUs that overlap with the Kenora Forest is summarized
 13 in Table 6 below.

14

1 **Table 6 Population Objective Ranges for Moose in Wildlife Management**
 2 **Units that Overlap the Kenora Forest**

Population Metric	Wildlife Management Unit (WMU)					
	2	6	7A	7B	8	9A
Year 2030 Population Objective Range	900 - 1,200	500 – 1,400	75 – 200	400 - 1,100	950 - 2,400	1,300 - 1,700
Current 2021 Population Estimate	1,268	199	21	212	692	687

3
 4 Many factors can influence the moose population, including the supply of suitable
 5 habitat, the population of predators, hunting pressure and hunting success, and climate.
 6 NDMNRF manages the provincial moose population according to direction in the
 7 "*Cervid Ecological Framework*", which acknowledges that the allowable harvest of
 8 moose in each WMU is managed through the provincial hunting regulations, and that
 9 habitat is created for moose through forest management. Research from Ontario
 10 indicates that forest management can improve habitat conditions for moose on
 11 landscapes where fire is suppressed because forest harvesting can create accessible,
 12 nutritious browse where there would otherwise be only mature and older forest (e.g., the
 13 Stand & Site Guide 2010). This is reflected in the NDMNRF's non-spatial and spatial
 14 habitat models for moose (Ontario's Landscape Tool - Moose - Elkie et al. 2013).

15
 16 The *Cervid Ecological Framework* states that it "harmonizes and integrates habitat and
 17 population management priorities to provide overarching guidance", and that "the forest
 18 management planning process will be the primary mechanism for addressing cervid
 19 habitat management on Crown lands within the Area of the Undertaking." The
 20 framework puts the Kenora Forest mainly in cervid ecological zone D1 (smaller portions
 21 of zones A in north, and C1 in southeast)(text map Figure 25), where the "broad cervid
 22 management guidance" is:

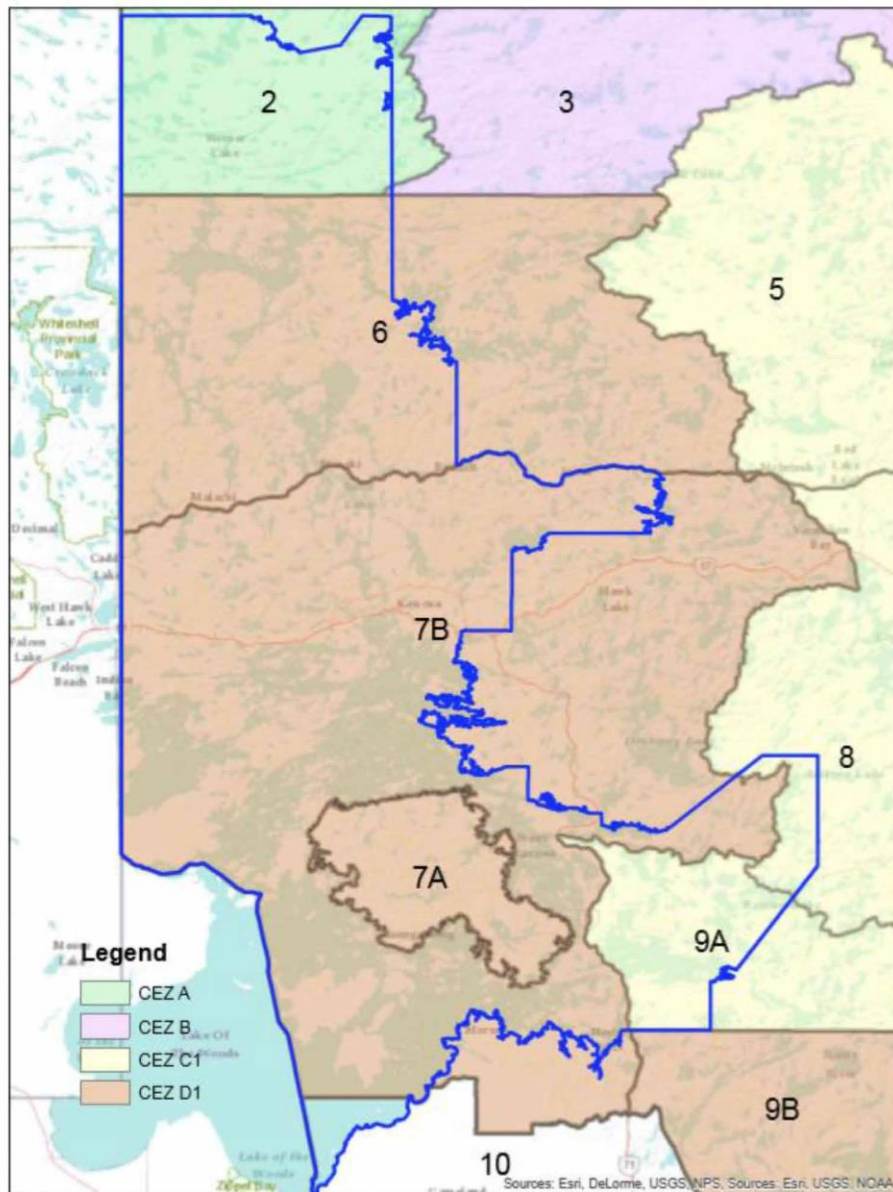
- 23 • **Cervid Zone A:** Woodland Caribou habitat management should be
 24 emphasized as a primary consideration. Moose habitat management may be
 25 emphasized (where appropriate as per species-specific policy direction).
 26 Deer habitat management not emphasized.
- 27 • **Cervid Zone D1:** Moose habitat management should be emphasized. Deer
 28 habitat management should be emphasized, particularly provisions of winter
 29 deer concentration habitat in the most western portions of the Zone. Elk elk
 30 habitat management may be considered and addressed at the local level
 31 (where appropriate as per species-specific policy direction).
- 32 • **Cervid Zone C1:** Moose habitat management should be emphasized as a
 33 primary consideration. Deer habitat management not emphasized. Elk
 34 habitat management not emphasized.

35

1 The framework also says that cervid management will be supported by the best
 2 available scientific information, and that cervid management objectives will be
 3 harmonized with other elements of biodiversity, including other wildlife species and
 4 habitat management direction to achieve a desired landscape and ecologically-based
 5 outcome.

6
 7
 8
 9

Figure 25 Location of the Kenora Forest (blue outline) with Respect to NDMNRF’s Cervid Ecological Zones (CEZ) in northwestern Ontario



10
 11

1 As explained in section 2.1.2.4, the Ontario's coarse filter- fine filter approach is used in
2 the FMP to provide habitat for wildlife. This is directed mainly through the Boreal
3 Landscape Guide and the Stand and Site Guide. Both of these guides permit forest
4 managers to identify "large landscape patches" 10,000 hectares or greater in size
5 where long-term caribou habitat and short-term moose habitat will be enhanced, while
6 remaining consistent with other landscape-level direction (such as the milestones for the
7 Kenora Forest in the Boreal Landscape Guide, Table A1, Table 4).

8
9 **(b) Furbearers** - There are 175 registered traplines in the Kenora Forest. Additionally,
10 there are approximately 17 First Nation Community traplines located with the Kenora
11 Forest. Registered trap lines cover the entire Kenora Forest. The major fur bearing
12 animals that are of economic importance are beaver, fox, muskrat, lynx, otter, mink,
13 fisher, and marten. NDMNRF obtains information on these furbearers from trappers.
14 In most cases the coarse filter approach described above is being used to provide
15 habitat for these species (i.e., creating an approximately natural amount and distribution
16 of forest types and age classes through forest harvesting, retention, and regeneration;
17 see Section 2.1.2.4). However, there are also fine-filter actions that are being taken to
18 provide shoreline forest habitat for beavers (some harvesting to shore is permitted in the
19 water quality AOC prescriptions in Table FMP-11, as discussed above), and to protect
20 occupied dens (CROs for furbearing mammal dens and burrows in the ground, under
21 piles of coarse woody material, or in large trees; see Section 4.2.2.2 Conditions on
22 Regular Operations).

23
24 **(c) Herons and Ospreys** – (Bald Eagles discussed in Section 2.1.4.1 Species at Risk)
25 NDMNRF conducts surveys for large stick nests periodically in the areas identified for
26 operations so that heron colonies and osprey nests can be protected. The locations are
27 recorded in NDMNRF's values database (LIO), and updated as required. In February
28 2021, LIO contained 35 records for great blue heron nesting colonies within the
29 boundaries of the Kenora Forest, and 130 osprey nests. There are also 17 unidentified
30 raptor nests that likely belong with either bald eagle or osprey. All of the nests and
31 colonies will be protected with appropriate AOC prescriptions that were developed from
32 the Stand and Site Guide (Table FMP-11), including prescriptions for inactive or
33 alternate nests. If new nests are discovered during the course of operations, these are
34 protected as well. The coarse filter approach to habitat management described in
35 Section 2.1.2.4, in combination with the AOCs for nests and the AOCs and CROs for
36 wetlands and water quality will provide a supply of suitable nesting and hunting habitat
37 for these species over the long term.

38
39 **(d) Hawks, Ravens, Turkey Vultures, and Owls** - The Kenora Forest provides nesting
40 and hunting habitat for ravens, turkey vultures, and a wide variety of birds of prey (owls,

1 hawks, falcons). The Ontario Breeding Bird Atlas (www.birdsontario.org) shows many
2 occurrences of the following species within or adjacent to the Kenora Forest: red-tailed
3 hawk, broad-winged hawk, Cooper's hawk, northern goshawk, merlin, kestrel, barred
4 owl, great horned owl, northern saw-whet owl, boreal owl, northern harrier, short-eared
5 owl, and long-eared owl. Some of these species use stick nests, and a few nest in
6 cavities. There are no known active peregrine falcon nesting sites on the Kenora Forest.
7 The coarse filter approach to habitat management described in section 2.1.2.4 will
8 provide a supply of suitable nesting and hunting habitat for these species over the long
9 term. To ensure that nests that are in LIO and those that are discovered during
10 operations are protected, the FMP contains AOC prescriptions that were developed
11 from the science-based direction in the Stand and Site Guide (Table FMP-11).

12
13 **(e) Grouse** - Ruffed grouse and spruce grouse are valued as game birds and both are
14 common in the Kenora Forest, based on maps of occurrence in the Ontario Breeding
15 Bird Atlas and an abundant supply of habitat. NDMNRF's "Habitat Relationships of
16 Wildlife in Ontario" (Holloway et al. 2002) concludes that ruffed grouse prefer sapling
17 and immature poplar, birch, and mixedwood forest units, forest units that are common in
18 the Kenora Forest. About 21% of the Kenora Forest is hardwood-dominated forest
19 (HRD, POD forest units) and 31% is dominated by mixedwoods (HMX, BFM, CMX).
20 Holloway et al. concluded that spruce grouse prefer sapling age jack pine, and that they
21 will use sapling and older forest types dominated by spruce as well. There is an
22 abundance of habitat that could be used by spruce grouse in this forest; for example,
23 about 48% of the forested area is conifer-dominated forest units. Forest harvesting
24 followed by regeneration to pure conifer (especially jack pine) will be beneficial to
25 spruce grouse. The coarse filter approach to habitat management described in section
26 2.1.2.4 will provide a supply of suitable nesting and hunting habitat for these species
27 over the long term. The FMP contains a CRO to protect grouse nests that are
28 encountered during operations (Section 4.2.2.2 Conditions on Regular Operations).

29
30 **(f) Black Bear** - NDMNRF has a variety of sources of information on the black bear
31 population in the region. Information is obtained from sources such as hair transects
32 established in WMUs and from mandatory harvest reports by outfitters and bear

2 Holloway, G., B. Naylor, and R.W. Watt. 2004. Habitat relationships of wildlife in Ontario – revised habitat suitability models for the Great Lakes-St. Lawrence and boreal east forests. OMNR, Northeast Science and Information, Timmins, and Southern Science and Information, North Bay. Joint Technical Report No. 1.

1 hunters. Holloway et al. (2004) described preferred black bear habitat as the pre-sapling
2 development stage (recently disturbed) of forest units dominated by spruce or jack pine
3 (with an abundant supply of blueberries, ants, and other food), forest units dominated by
4 mixedwoods, as well as old poplar, birch, and mixedwood forest where bears can find
5 nutritious food in the fall. The Kenora Forest provides abundant habitat for black bears.
6 In general, the black bear density appears to be relatively high compared to other
7 regions. The densities are somewhat stable over the past 10 years on the Kenora
8 Forest. The coarse filter approach to habitat management described in section 2.1.2.4
9 will continue to provide a supply of suitable habitat for the black bear over the long term.
10 The FMP includes an AOC prescription to protect occupied dens of the black bear
11 (Table FMP-11 AOC D01).

2.1.4.3 Values Information

Values are features, benefits, or conditions of the forest that are linked to a geographic area, that are of interest from various points of view, and that must be considered in forest management planning. The values maps are intended to be used primarily as background information for planning, and will also be used for display purposes and to solicit additional information about natural resource features, land uses and values. Any person or party can provide values information at any time. Information about values normally comes from the NDMNRF or other government staff; SFL holders, other forest resource licence holders and their operators; non-government organizations, third parties, other resource users, or the public; and First Nation and Métis communities.

The public consultation process described in the *Forest Management Planning Manual* (2020) supports the collection and provision of information about values at any time during the development and implementation of a forest management plan.

Values can be classified into two groups based on the requirements to provide information for forest management planning: timber values and non-timber values. Timber values include such features as growth and yield plots, research plots, and seed orchards. The FRI is not considered as a timber value for purposes of prescribing requirements for values information.

Non-timber values include such features as cultural heritage sites, First Nation and Métis values, and critical wildlife and fisheries habitat areas, such as caribou nursery areas, mineral licks, raptor nests, or spawning areas. Non-timber values also include various uses such as wild rice production areas, recreational areas, native use areas, and traditional use areas.

Values maps provide a summary of the geographic location of *known* values about which further inventory information is available. A value is considered to be a *known* value when there is sufficient information to describe its geographic location and its basic features. Known values must be considered in forest management planning. The NDMNRF shall determine if a value can be treated as a known value based on the available information and in consideration of standards described in the *Forest Information Manual* (FIM, MNRF, 2020).

NDMNRF values information is stored in the *Land Information Ontario* (LIO). The *Land Information Ontario* is a Geographic information System (GIS) based system for managing the storage of the Ontario Ministry of Natural Resources and Forestry digital

land-related information in a standardized manner. It provides the ability to store, maintain and access over 600 different geographic feature types.

Information about certain values such as, the location and description of First Nation and Métis values, cultural heritage sites, sites of Species at Risk (special concern, threatened and endangered), lake sturgeon and muskellunge spawning sites, rare vascular plants, fish spawning areas, etc. may be considered as “sensitive information” that, if released or portrayed on maps may pose a threat to the existence, integrity, or health of those values. Sensitive information about values shall not be made available or accessible to the public. Where the availability of information could be considered as potentially detrimental to the existence of a value, the NDMNRF shall determine whether or how the value can be depicted on a values map.

For each forest management plan, *Forest Information Manual* and the FMPM require the production by NDMNRF of a series of maps depicting specific values on the Kenora Forest that are used for forest management planning purposes. The values maps consist of a set of maps based on the following themes:

- Natural Resource Features – Wildlife & Forestry (Flora & Fauna)
- Natural Resource Features – Fisheries & Wetlands
- Resource Uses
- Land Values
- Bear Management Areas
- Trapline Areas
- Resource-Based Tourism Values
- Cultural Heritage Values

The most up-to-date versions of the values maps are maintained at the NDMNRF Kenora District Office and are available for public viewing. Values Maps are included in the FMP as digital maps:

MU644_2022_FMP_MAP_VALWILD_00,
MU644_2022_FMP_MAP_VALFISH_00,
MU644_2022_FMP_MAP_VALREC_00,
MU644_2022_FMP_MAP_VALLAND_00,
MU644_2022_FMP_MAP_VALBMA_00,
MU644_2022_FMP_MAP_VALTRAP_00, and
MU644_2022_FMP_MAP_VALRBT_00.

The NDMNRF cultural heritage values map (MU644_2022_FMP_MAP_VALCULT_00) is not included as part of the digital submission and the maps is retained at the NDMNRF District office.



1 Where a known value may be affected by forest management activities, the *Forest*
2 *Management Planning Manual* (2020) requires that a defined geographic area adjacent
3 to the feature be established. The defined geographic area is called an “area of
4 concern” (AOC) (Table FMP-11). An operational prescription is developed for each
5 AOC or group of AOCs to prevent, minimize or mitigate adverse effects of forest
6 management operations on the value. Operational prescriptions for AOCs may be
7 reserves (e.g. prohibition of all operations, or prohibition of certain operations), modified
8 operations (e.g. specific conditions or restrictions on operations) or regular operations
9 (i.e., in accordance with the silvicultural ground rules), individually or in combination.
10 Modified operations may be regular operations with conditions (e.g. timing, equipment),
11 or unique prescriptions that are developed to protect or manage specific values or land
12 uses. Areas estimated to be impacted by reserves were incorporated in the strategic
13 modelling for the LTMD in order to calculate the most realistic available harvest area for
14 this plan and to assess long-term objective achievement.

15
16 Operational prescriptions developed for an individual AOC or groups of AOCs are
17 developed using the forest management guides identified by NDMNRF as applicable to
18 the forest (e.g. the Stand and Site Guide). These AOC Prescriptions are documented in
19 Table FMP-11. An operational prescription may also be proposed from another planning
20 exercise for inclusion in the FMP (e.g., Resource Stewardship Agreements (RSAs)). In
21 some situations, the planning team will develop an operational prescription (e.g., C01
22 consideration for a Trapper’s Cabin, or AOCs I01-I07 to protect Indigenous values).

23
24 Additional information regarding the development of operational prescriptions for AOCs
25 associated with known values on the Kenora Forest is provided in Section 4.2
26 Prescriptions for Operations.

27
28 To aid the protection of representative ecosystems of old growth red pine and white
29 pine, the Northwest Region of the MNR completed NWST Technical Report TR-98,
30 titled “*Old Growth Red and White Pine Forests: Northwest Region Report on*
31 *Protection*”. The intent of this report was to identify old growth areas and candidate
32 sites for protection. Old growth pine was defined as being older than 130 years of age
33 for red pine, and 150 years of age for white pine. Once old growth stands were
34 identified, candidate sites for old growth area protection were determined based on
35 specific criteria. Basically core red pine and white pine stands which were identified in
36 the first stage of the report, and associated stands containing red pine and white pine
37 were identified as old growth area aggregations. There were six sites identified in the
38 Kenora Forest in this report (NWST Technical Report TR-98). Four sites on islands in
39 Lake of the Woods were they were incorporated into a Conservation Reserve, and the
40 two remaining sites were removed from consideration (Big Sand Lake, Sabaskong Bay
41 (Aulneau)).



1 The *Old Growth Policy for Ontario's Crown Forests (2003)* also guides the maintenance
2 or restoration of old growth forests on the Kenora Forest. Old growth red pine and white
3 pine forest communities, if present, portrayed on Map 4.1b Natural Resource Features
4 Values – Wildlife and Forestry. There are 1,969 hectares of old forest red pine and
5 white pine at the start of this plan (all in PRW forest unit area).
6
7 Forest management considerations are important to the conservation of red pine and
8 white pine on the land base. Some areas are protected with a combination of land-use
9 planning and existing AOCs while others are going to be managed to promote
10 regeneration by utilizing a clearcut with seed tree silviculture strategy to promote the
11 regeneration of red pine and white pine forest types. CORLAPs and CROs have also
12 been developed to help address conservation of red pine and white pine across the land
13 base (Section 4.2.2.2 Table 28 and Section 4.5.9 Table 48, respectively) when
14 encountered as incidental trees within harvest blocks or right of way.
15
16 This plan has specific red pine and white pine old growth forest targets in Section 3.6.2,
17 Objective 2 Indicator 2b to increase the area of old growth in the red pine and white pine
18 forest unit. Based on results from the strategic modelling, old growth forest communities
19 on the Kenora Forest will increase in representation across the landscape at increasing
20 levels, consistent with the desirable level endorsed in the Long-Term Management
21 Direction.

2.1.4.3.1 Land Use Descriptions

Information on land use intent and management direction on the Kenora Forest is documented in the *Crown Land Use Policy Atlas (2003)*. The Atlas outlines land use direction for public lands that are owned by the Province of Ontario and managed by the Ontario Ministry of Natural Resources.

The vast majority of the Kenora Forest is designated as General Use Areas. Based on the land use intent for a designated land use area, a variety of different land uses may be specified for a given area. Within General Use Areas there are generally no restrictions on forest operations. Where identified values are adjacent to or within areas proposed for forest operations, Area of Concern planning is initiated to mitigate any negative impacts on the value (Section 4.2, Table FMP-11).

(a) Resource-based Tourism Areas

The tourism industry has been an important component in the Kenora area for a long time. Lodges and cottages were in operation by 1905. At that time the activities were based on hunting, fishing and canoeing opportunities. The Kenora Forest has attracted recreation-based tourism since the late 19th Century due to its variety of natural values. The area continues to be a desired recreational destination for canoeing, boating, fishing, hunting, hiking, snowmobiling, camping and cottaging. Resource based tourism contributes to the economic stability of the Northwest Region, and specifically to the Kenora District.

There are 362 tourist operators in Kenora District, of which 86 are associated with the Kenora Forest. The majority of these businesses operate during the summer months and are primarily located on the main water bodies of the Kenora Forest. These opportunities are supported by a variety of lodges, outposts, camps and resorts. Tourism co-exists with the many resource based activities occurring within the Kenora Forest. Forestry impacts tourism by altering the landscape and affecting the experience of visitors.

Additional information on tourism is located in the Social and Economic Description in Section 2.2.3.2 Recreation and Tourism and in Supplementary Documentation E.

During Stage 1 of the planning process all 85 resource-based tourist outfitters, and another 11 stakeholders with previously identified interest, were contacted to provide the opportunity to develop a Resource Stewardship Agreement (RSA)(96 letters sent). The three (3) operators that expressed interest in additional discussions were

1 contacted during Stage 2 of the planning process. All three operators opted for area of
2 concern planning in Stage Three of plan production rather than formal RSAs. Miisun
3 has met with each party on several occasions throughout the planning process, to
4 discuss concerns with noise, access and aesthetics to preserve the identified tourism
5 values. Identified concerns have been addressed through area of concern (AOC)(Table
6 FMP-11) planning to the satisfaction of RBTOs.

7
8 Maintenance of the viability of the tourism industry has been considered in the
9 development of this FMP through the protection of tourism values in the forest
10 management planning process through the application of NDMNRF's approved forest
11 management guide(s) that addresses forestry and resource-based tourism and the use
12 of RSA's as one method of protecting and sustaining these values (Section 4.2
13 Conditions on Operations, Table FMP-11).

14 **(b) Mineral, Aggregate and Quarry Areas**

15
16
17 Historically, mining and mineral exploration have been an important activity in this
18 management unit. The Lake of the Woods area was the site of intensive prospecting for
19 gold in late 19th and early 20th centuries with eight producing mines resulting and four
20 significant documented deposits remaining. There are no operating metal mining
21 operations in the management unit. There are significant concentrations of gold,
22 nickel, copper, cobalt, and lithium contained within or adjacent to the management
23 unit.

24
25 There are an estimated 450 active mining claim units recorded in this management unit
26 as of September 2019, as indicated on the Ministry of Energy, Northern Development
27 and Mines' Mining Lands Administration System (MLAS) website.

28
29 Known prospectors and mining claim holders are on the FMP mailing list and have had
30 the opportunity to review and provide comments on proposed forest operations in the
31 Kenora Forest. Most often, prospectors and claim holders are interested in road
32 construction, maintenance, abandonment and possible restrictions as a means of
33 access to their claims. Normally, nothing on a mining claim is considered a value and
34 rarely is claim or exploration-related AOC's required. The plan provides operational
35 considerations for mining claim posts through CROs and CORLAPS. Also, each year,
36 any known prospectors and mining claim holders are notified of scheduled forest
37 operations as part of the AWS.

38
39 The FMP Values Maps provide detail for active mining claims, locations of producing
40 quarries, past-producing mines and developed prospects with reserves.

1
2 The Kenora Forest has numerous potential aggregate extraction areas. There are six
3 (6) open Category #9 aggregate pits on the Kenora Forest managed by Miisun which
4 are used for the construction of forest access roads.

5
6 A number of hydroelectric facilities are located within or adjacent to the forest on the
7 English River between Lac Seul and the Manitoba border and on the Winnipeg River
8 between Lake of the Woods and the English River. Four hydroelectric facilities are
9 located within Kenora district and supply power to the area. Two of these are owned by
10 Ontario Power Generation (Caribou Falls, Whitedog Falls) and the other two (both in
11 Kenora: Kenora Powerhouse, Norman Dam) are owned by H2O Power. Two additional
12 sites owned by Ontario Power Generation are located within the district (Ear Falls,
13 Manitou Falls).

14 15 **(c) Crown Land Recreation and Cottaging**

16
17 Non-commercial recreational opportunities are abundant on the Kenora Forest. People
18 utilize Crown land and waters for fishing, boating, hunting, gathering, trails, camping
19 and general recreation.

20
21 There are also thousands of kilometres of mapped and unmapped trails of various types
22 on Crown land within the Kenora Forest. These roads provide opportunities such as
23 hunting, camping, berry picking, mushroom picking, fuel-wood collection, trapping, bird
24 watching, horseback riding and hiking trails, along with access to lakes for activities
25 such as boating and angling. Additional recreational opportunities are provided through
26 canoe routes, snowmobile trails, and various public access points. There are numerous
27 private homes and recreational camps on the Kenora Forest.

28 29 **(d) Trapping (commercial fur)**

30
31 There are 175 registered traplines in the Kenora Forest. Additionally, there are
32 approximately 17 First Nation Community traplines located with the Kenora Forest.
33 Registered trap lines cover the entire Kenora Forest. The major fur bearing animals
34 that are of economic importance are beaver, fox, muskrat, lynx, otter, mink, fisher,
35 and marten. Wildlife habitat was considered during development of the Long-Term
36 Management Direction for the FMP. Implementation of the Boreal Landscape Guide
37 (coarse filter direction) provides the overarching guidance in ensuring forest
38 management efforts are moving towards and/or providing for the necessary habitat
39 requirements for a variety of species, (forest composition and landscape pattern). In the
40 2012 FMP, marten habitat was included as a selected wildlife species and direction

1 from the *Forest Management Guidelines for the Provision of Marten Habitat* was
2 followed. Similar landscape-level direction is achieved in this FMP through application
3 of the texture of mature and old forest indicator and mature and late conifer-dominated
4 landscape classes. Additionally, direction for wildlife trees and downed woody material
5 support marten habitat at the stand and site scales.

6
7 All primary trappers are on the FMP mailing list and have had the opportunity to review
8 and provide comments on proposed forest operations in the Kenora Forest. Individual
9 trap line boundaries, as well as known trapline cabins and trails are considered values
10 and mapped. Where identified values are adjacent to or within areas proposed for
11 forest operations, Area of Concern planning may be initiated to mitigate any negative
12 impacts on the value. Typically, AOC prescriptions may be applied to protect trails and
13 address additional concerns brought forth by trappers regarding operations near trapline
14 cabins, timing restrictions, or notification requests. All primary trappers are kept
15 informed of changes to the planned operations on an annual basis through the
16 notification associated with the Annual Work Schedule.

17 18 **(e) Private Land**

19
20 There are 44,359 hectares of patent private land on the Kenora Forest. In accordance
21 with the *Crown Forest Sustainability Act*, Patent Land is not included in this forest
22 management plan. Patent Land was not considered in the strategic modelling for this
23 plan, nor are any forest operations proposed in this FMP on any Patent Land. Any
24 future forest management activities planned for patent land must be planned and
25 approved outside of the forest management planning process.

26
27 Where patent land is adjacent to areas proposed for forest operations, Area of Concern
28 planning discussions are initiated with the patent land owner. Harvest operations
29 proposed adjacent to patent land are planned to ensure no encroachment on these
30 areas, unless a prior agreement with the land owner has been reached. Road building,
31 road-use and forest operations adjacent to patent land are also planned to ensure no
32 negative impact on these areas. Such mitigative techniques are documented in the
33 AOC planning documentation (Table FMP-11, Supplementary Documentation I).

34 35 **(f) Provincial Parks and Conservation Reserves**

36
37 Parks and Protected areas in or adjacent to the Kenora Forest are listed in Table 7,
38 sorted by their designation class. The Parks and Protected Areas are designated
39 through regulation under the *Provincial Parks and Conservation Reserves Act, 2006*,
40 (<https://www.ontario.ca/laws/statute/06p12>), or under the *Public Lands Act, Wilderness*
41 *Areas Act*, etc. (e.g. Enhanced Management Areas, Wilderness Area, General Use

1 Areas).

2

3 **Table 7 Parks and Protected Areas on, or adjacent to, the Kenora Forest**

4

Name	CLUPA * Reference ID	Designation (Class)	Area (ha)
Agassiz Peatlands Provincial Park	P2377	Nature Reserve	5,415
Caliper Lake Provincial Park	P2586	Recreational	151
Eagle-Dogtooth Provincial Park	P2363	Waterway Class	41,128
Lake of the Woods Provincial Park	P2379e	Natural Environment Class	11,588
Rushing River Provincial Park	P2615	Recreational	340
Sable Islands Provincial Park	P2417	Nature Reserve	2,641
Sioux Narrows Provincial Park	P2611	Recreational Class	130
Woodland Caribou Provincial Park	P2370	Wilderness Class	470,620
Aulneau Interior Conservation Reserve	C2375	Conservation Reserve	2,296
Big Sand Lake Conservation Reserve	C2593	Conservation Reserve	284
Campfire River Conservation Reserve	C2368	Conservation Reserve	4,180
Dryberry Lake Conservation Reserve	C2357	Conservation Reserve	21,850
Eagle - Snowshoe Conservation Reserve	C2405	Conservation Reserve	35,621
Lake of the Woods Conservation Reserve	C2366	Conservation Reserve	45,960
Lake of the Woods Waters Conservation Reserve	C2501	Conservation Reserve	1,984
Musk Lake Conservation Reserve	C2382	Conservation Reserve	4,854
Octopus Creek Conservation Reserve	C2373	Conservation Reserve	608
Aulneau Peninsula	E2376w	Enhanced Management Area	79,280
Derby Lake Nature Reserve Wilderness Area	W2012	Wilderness Area	178
Minaki	G2599	General Use Area	153,279
Silver Lake	G2551	General Use Area	170,536
South Lake of the Woods General Use Area	G2592	General Use Area	101,933
Western Peninsula	G2604	General Use Area	20,956

5 * NDMNRF's Crown Land Use Planning Atlas (CLUPA) reference identification number

6



1 Parks and Conservation Reserve areas lying within the boundaries of the Kenora Forest
2 encompass approximately 85,350 hectares, which represents about 7.5% of the Crown
3 land area within the Kenora Forest.

4
5 Provincial Parks and Conservation Reserves contribute to the achievement of the
6 following objectives:

- 7
8 1. To permanently protect representative ecosystems, biodiversity and provincially
9 significant elements of Ontario's natural and cultural heritage and to manage
10 these areas to ensure that ecological integrity is maintained.
- 11 2. To provide opportunities for ecologically sustainable outdoor recreation
12 opportunities and encourage associated economic benefits.
- 13 3. To facilitate scientific research and to provide points of reference to support
14 monitoring of ecological change on the broader landscape.

15
16 Provincial Parks also provide opportunities for residents of Ontario and visitors to
17 increase their knowledge and appreciation of Ontario's natural and cultural heritage.

18
19 Within Provincial Parks and Conservation Reserves certain activities are prohibited:

- 20 1. Commercial timber harvest.
- 21 2. Generation of electricity.
- 22 3. Prospecting, staking mining claims, developing mineral interests or working
23 mines.
- 24 4. Extracting aggregate, topsoil or peat.
- 25 5. Other industrial uses. *2006, c. 12, s. 16 (1).*

26
27 Provincial Parks, Conservation Reserves and Forest Reserves are considered values
28 and when forest operations are proposed on the Kenora Forest adjacent to these
29 values, Area of Concern planning discussions are initiated with Ontario Parks staff for
30 Provincial Parks, Conservation Reserves and Forest Reserves. If planned, harvest
31 operations proposed adjacent to Provincial Parks, Conservation Reserves and Forest
32 Reserves are planned to ensure no encroachment on these areas. Road building, road-
33 use and forest operations adjacent to Provincial Parks, Conservation Reserves and
34 Forest Reserves are also planned to ensure no impact on these areas. Such mitigative
35 techniques are documented in the AOC planning documentation.

36 37 **General Benefits of Parks and Protected Areas**

38
39 Provincial parks and conservation reserves provide places where people can enhance
40 their health and well-being through enjoyment and recreational use of the outdoors,

1 while developing a greater appreciation for Ontario's natural diversity. The following are
2 important benefits and help to demonstrate how parks support our quality of life:

- 3
- 4 • Protection and contribution to ecological functions (air quality, water quality, flood
5 control, soil stabilization),
- 6 • Biodiversity contributions (genetic material, protection of species at risk),
- 7 • Protection of resource integrity (some of the last green spaces left in the province),
- 8 • Health effects from use of parks (mental, physical, spiritual benefits),
- 9 • Worker productivity (healthy and happy workers tend to be more productive - a visit
10 to a provincial park can contribute),
- 11 • Educational benefits (young and old learning about our environment),
- 12 • Scientific benefits (research in provincial parks),
- 13 • International responsibilities to protect natural settings, features and wildlife,
- 14 • Business location decisions (quality of life/business) and community cohesion.

15

16 Economic impacts are based on expenditures such as those made by the park on
17 operations and capital, as well as average visitor trip expenditures (camper and day
18 visitor).

19

20 As well, the public and municipal officials should be aware that provincial parks help to
21 make their communities attractive for business as well as for tourists and retirees. The
22 retirement community brings in pension income, which is often indexed to inflation and
23 is recession proof. Communities with attractive waterfronts, low crime, recreational
24 activities and healthy environments are sought out by the retirement community. The
25 park budget (operating and capital) represents a grant or transfer payment from the
26 government to their community. Not all communities have this transfer payment. The
27 community may also receive grants in lieu of taxes.

28

29

30 **Provincial Parks** - Under the *Provincial Park and Conservation Reserves Act, 2006*,
31 the Lieutenant Governor in Council may classify Provincial Parks in one of six classes.
32 There are eight (8) Provincial Parks located on or adjacent to the Kenora Forest:

33

34 1. Wilderness Class Parks

35 The objective of wilderness class parks is to protect large areas where the forces
36 of nature can exist freely and visitors travel by non-mechanized means, except
37 as may be permitted by regulation, while engaging in low-impact recreation to
38 experience solitude, challenge and integration with nature. 2006, c. 12, s. 8 (2).

39

40 2. Nature Reserve Class Parks



1 The objectives of nature reserve class parks are to protect representative
2 ecosystems and provincially significant elements of Ontario's natural heritage,
3 including distinctive natural habitats and landforms, for their intrinsic value, to
4 support scientific research and to maintain biodiversity. 2006, c. 12, s. 8 (3).

5
6 3. Cultural Heritage Class Parks

7 The objective of cultural heritage class parks is to protect elements of Ontario's
8 distinctive cultural heritage in open space settings for their intrinsic value and to
9 support interpretation, education and research. 2006, c. 12, s. 8 (4).

10
11 4. Natural Environment Class Parks

12 The objectives of natural environment class parks are to protect outstanding
13 recreational landscapes, representative ecosystems and provincially significant
14 elements of Ontario's natural and cultural heritage and to provide high quality
15 recreational and educational experiences. 2006, c. 12, s. 8 (5).

16
17 5. Waterway Class Parks

18 The objectives of waterway class parks are to protect recreational water routes
19 and representative and significant terrestrial and aquatic ecosystems and
20 associated natural and cultural features and to provide high quality recreational
21 and educational experiences. 2006, c. 12, s. 8 (6).

22
23 6. Recreational Class Parks

24 The objective of recreational class parks is to provide a wide variety of
25 compatible outdoor recreation opportunities in attractive natural
26 surroundings. 2006, c. 12, s. 8 (7).

27
28 **Conservation Reserves** - There are eight (8) Conservation Reserves located in or
29 adjacent to the Kenora Forest. Generally, Conservation Reserve sites contain
30 representative landform and vegetation types.

31
32 **Wilderness Area** – The Derby Lake Nature Reserve Wilderness Area is located in the
33 Kenora Forest.

34
35 **Enhanced Management Area** – The Aulneau Peninsula is an Enhanced Management
36 Area located within the Kenora Forest.

37
38 **General Use Areas** – There are four (4) General Use Areas on the Kenora Forest:
39 Minaki, Silver Lake, South Lake of the Woods, and the Western Peninsula.

40



1 The following is a description of each Provincial Park and Conservation Reserve within
2 the Kenora Forest and associated the benefits provided. See Supplementary
3 Documentation E for additional details.

4

5 **Provincial Parks**

6

7 **Agassiz Peatlands Provincial Park (P2377e)** was formally established as 'Agassiz
8 Peatlands Provincial Nature Reserve' in 1985, under Ontario regulation 81/85. The
9 nature reserve was later recommended for expansion as part of Ontario's Living Legacy
10 (OLL), a land use strategy that guides the planning and management of Crown lands in
11 central and portions of northern Ontario, being regulated as a provincial park in 2002.
12 The nature reserve classification recognizes the distinctive nature habitats and
13 landforms found in the park and its protection for educational purposes and as a gene
14 pool for research to benefit present and future generations. At 5,415 ha, this park
15 includes a portion of the largest peatland complex in the southern part of Northwestern
16 Ontario and is directly linked to the ancient lakebed of glacial Lake Agassiz. Agassiz
17 Peatlands Provincial Park is also the most dramatic example of a northern ribbed fen in
18 the site region and is home to many rare forms of flora and fauna, including the
19 insectivorous linear-leaved sundew, Townsend's jackrabbit and black terns. The park is
20 located within the Ministry of Natural Resource's Administrative District of Fort Frances,
21 approximately 10 km northeast of the Town of Rainy River.

22

23 **Caliper Lake Provincial Park (P2586)** is a 147 ha recreational class park. It was
24 regulated in 1960 as Caliper Lake Provincial Camp and Picnic Grounds. The park is
25 situated on Caliper Lake within the Geographic Township of Claxton and in the
26 Territorial District of Rainy River, and is located approximately 140 kilometres southeast
27 of Kenora and 90 kilometres northwest of Fort Frances and International
28 Falls, MN, U.S.A. The park is accessed from Highway 71. Caliper Lake Provincial Park
29 is best known for its scenic campground and day-use area nestled within a mature red
30 and white pine forest. Caliper Lake receives moderate use in the summer months and
31 supports a wide range of recreational activities including camping, swimming, sport
32 fishing, hiking, bicycling, picnicking and boating.

33

34 **Eagle-Dogtooth Provincial Park (P2363)** is a 41,128 ha Waterway Park located west
35 of Vermilion Bay. It covers a series of adjoining lakes that are of significant ecological
36 and recreational importance. The park is mainly adjacent to the Kenora Forest, with
37 Populus Lake being within the Kenora Forest. The majority of the park is located in the
38 Wabigoon Forest, and is also adjacent to the southern boundary of the Dryden Forest.
39 This park provides a waterway linkage between Eagle Lake and nearby protected areas
40 (e.g. Rushing River, Winnange). It is an important recreational waterway. The site



1 contains regionally significant moraines, wetlands, pine forest ecosystems, eagles,
2 water fowl and is an important recreation and tourism area. This chain of lakes is used
3 as a popular fishing area, canoe route and is part of the provincial snowmobile trail
4 network. The actual amount of park use is unknown.

5
6 This area contains a portion of the Experimental Lakes Area (ELA). The ELA is a
7 controlled area set aside by the Federal and Provincial Governments for the purpose of
8 conducting whole-lake experiments. The experiments are conducted by Fisheries and
9 Oceans Canada to provide quantitative guidelines for the management of lakes,
10 streams, their watersheds and airsheds in order to protect them from the adverse
11 effects of human activities and to enhance their value as resources. The current
12 agreement was renewed in April 2010.

13
14 **Lake of the Woods Provincial Park (P2379e)** is made up of four large islands in south
15 Lake of the Woods. These islands include Painted Rock, Splitrock, Dawson and Bigsby
16 as well as the smaller Three Sisters Islands. The islands are relatively undisturbed and
17 provide good examples of local vegetative communities and are also representative of
18 Landscape Unit 28; the Manitou-Kenora Drift Complex, characterized by large, relatively
19 homogeneous terrain of rolling, bedrock-controlled uplands interspersed with numerous
20 lakes and wetlands. It should be noted, however, that Bigsby Island itself represents
21 Landscape 31, The Rainy River Clay Plain.

22
23 Painted Rock, Splitrock, Dawson, Bigsby and the Three Sisters Islands were regulated
24 as part of the existing Lake of the Woods Provincial Park in 1985. The mainland section
25 of the Lake of the Woods Park was deregulated as a Provincial Park in 1998. The park
26 is classified as a Natural Environment park and is 11,588 hectares in size.

27
28 **Rushing River Provincial Park (P2615)** is scenically located along a series of rapids
29 on Rushing River and on the shore of Dogtooth Lake. The park is situated
30 approximately twenty kilometres southeast of Kenora on Highway 71. It was put into
31 regulation as a recreation class provincial park in September 1958 at a size of 340
32 hectares. It has been developed consistent with the Kenora District Land Use
33 Guidelines. Natural features include jack pine uplands, wetlands and a lush river valley.
34 The park has a popular campground, day-use area and interpretive facilities/trails.
35 Rushing River Provincial Park offers a wide range of recreation opportunities including
36 walking, cross-country skiing, swimming, boating and fishing.

37
38 **Sable Islands Provincial Park (P2417)** (2,641 ha), regulated as a nature reserve class
39 Provincial Park in 1985, is comprised of the Sable Islands in Lake of the Woods and a
40 portion of the adjacent mainland. The nature reserve classification recognized the

1 distinctive nature habitats and landforms found in the park, and its protection for
2 educational purposes and as a gene pool for research to benefit present and future
3 generations. This park includes excellent representation of barrier islands, a sand beach
4 dune community, an extensive peatland complex and several provincially significant
5 species.

6
7 The islands are presently used as a day-use recreational area by anglers who fish the
8 adjacent waters. Bait fishing is conducted in the shallow waters adjacent to the island.
9 The park serves as a highly productive staging and breeding area for waterfowl. The
10 area is presently inaccessible by road. Two private land inholdings are located within
11 the area. Other features include beach dunes, wetlands and rare plants.

12
13 **Sioux Narrows Provincial Park (P2611)** is located 5 kilometres north of Sioux Narrows
14 on the east side of Highway 71. The park is 135 hectares in size and was established
15 on June 25, 1957. The park boundary was amended in 2011 to add two parcels of land
16 that were acquired in the 1970s. Sioux Narrows Provincial Park is classified as a
17 recreation park. It provides camping as day-use opportunities and is operated by the
18 Township of Sioux Narrows - Nestor Falls in partnership with Ontario Parks.

19
20 **Woodland Caribou Provincial Park (P2370e)** (470,620 hectares) is located between
21 Red Lake and the Manitoba boundary. Woodland Caribou Provincial Park was
22 regulated in 1983 and is classified as a Wilderness class park.

23
24 Woodland Caribou Provincial Park protects representative earth and life science
25 features of Site District 4S-1, such as the Eagle-Finlayson Moraine, prairie-boreal
26 vegetation and habitat for Woodland Caribou, a threatened species. Woodland Caribou
27 Provincial Park provides a wide range of tourism, recreation and economic benefits for
28 the surrounding communities. The park provides opportunities for backcountry
29 canoeing, camping and outpost camp and main base lodge fishing. The diversity of
30 lakes and river systems in Woodland Caribou Provincial Park provides some of the
31 highest quality recreational fishing and canoeing in Ontario. The primary appeal for all
32 visitors is the wilderness setting and remote quality of Woodland Caribou Provincial
33 Park.

Conservation Reserves**Aulneau Interior Conservation Reserve (C2375)**

The Aulneau Interior Conservation Reserve, at 2,296 hectares, falls within a separately managed wildlife management unit (WMU 7A), representing solely the Aulneau Peninsula. It has been identified as an area containing representative vegetation types, including wetland communities (black ash swamp and shore fen) and mixedwoods. Other forest ecosystem types occurring within the conservation reserve include: red and white pine stands on bedrock and sandy soils at five shoreline locations; jack pine on burn and bedrock; as well as, bur oak and large-toothed aspen communities with prairie-associated species (such as big bluestem). A large peatland containing representation of black spruce and jack pine bog, treed fen, and conifer swamp also exists in the south portion of the conservation reserve.

Fishing is the primary activity practiced within the Aulneau Interior Conservation Reserve. Only archery and muzzle-loading guns are permitted for large game hunts for moose, black bear, and to a lesser extent white-tailed deer. Other recreational activities likely occurring within the conservation reserve boundaries include overnight camping, snowmobiling, and winter ice fishing.

Big Sand Lake Conservation Reserve (C2593)

Big Sand Lake Conservation Reserve is 284 hectares and is located on the northeast shore of Big Sand Lake approximately 40 kilometers north of the City of Kenora. The area is isolated and only accessible by boat or floatplane. The Conservation Reserve was regulated on January 7, 1995 and contains representative old growth red and white pine forest communities on weakly broken bedrock and weakly broken ground moraine. Activities such as snowmobiling and the use of all-terrain vehicles occur. Sport fishing is allowed in adjacent waters, however no sport fishing occurs in the area itself (no fishable water).

Campfire River Conservations Reserve (C2368)

Campfire River Conservations Reserve is located approximately 73 kilometres north of the City of Kenora. The reserve encompasses Paintpot Lake, the portion of Campfire River adjoining Paintpot and Salvesen Lakes, as well as the surrounding terrain. The conservation reserve is 4,180 hectares in size. Indigenous interests in the area are primarily those of Grassy Narrows First Nation and Wabaseemoong Independent Nation. The Conservation Reserve includes representation of mixed conifer forests of Spruce, Fir, Birch and Poplar. Wetland communities include: open wetlands, deep and shallow marshes, wet meadows, low shrub fens and thicket swamps with alder and willow.



1 The Conservation Reserve provides fishing opportunities, as well as opportunities for
2 hunting black bear, moose and waterfowl. There are no tourist lodges/outposts located
3 within or adjacent to Campfire River Conservation Reserve. However, guests residing at
4 lodges in Salvesen Lake may access the reserve by waterway since the reserve
5 borders Salvesen Lake's east shoreline.

6
7 **Dryberry Lake Conservation Reserve (C2357)** is 21,850 hectares in size and is
8 located to the east of Highway 71, and exhibits typical rugged terrain of northwestern
9 Ontario in a remote environment. This site contains representative landform and
10 vegetation types, including mixed conifer, sparse forest and burn on weakly and
11 moderately broken bedrock, and vegetated bedrock. Dryberry Lake was regulated as a
12 conservation reserve on May 21, 2003. Dryberry designated as a tourism lake.

13
14 **Eagle-Snowshoe Conservation Reserve (C2405)** is approximately 95 kilometres
15 northwest of Kenora and is 35,621 hectares in size. This protected area includes the
16 area from Snowshoe Lake along the Ontario/Manitoba border, and northeast along a
17 chain of lakes including Chase Lake and Midway Lake, and then ends at Eagle Lake
18 where it meets the Woodland Caribou Provincial Park boundary. Wabaseemoong
19 Independent Nation represents the Indigenous interests in the area of the conservation
20 reserve. The Eagle-Snowshoe Conservation Reserve contains representative
21 examples of Canadian Shield topography including a glaciated landscape characterized
22 by elongated lake systems, sudden changes in elevations, erratic drainage patterns,
23 thin soils, and massive bedrock. The vegetation within the reserve is representative of
24 the Southern Boreal Forest Region.

25
26 The conservation reserve supports a wide variety of wildlife including moose, white-
27 tailed deer, black bear, various small game animals, and furbearers such as beaver,
28 otter, marten, and fisher. In addition, this area contains important woodland caribou
29 habitat and several calving/nursery areas have been confirmed along the Eagle Lake to
30 Chase Lake corridor. This corridor also provides an important migration route for these
31 caribou. This area provides some of the highest quality recreational fishing
32 opportunities in the Kenora District for walleye, northern pike, and lake trout. Angling
33 serves to sustain seven outpost camps which contribute to the economy of the region.
34 In addition to fishing, the conservation reserve provides opportunities for hunting,
35 camping, and snowmobiling.

36 37 **Lake of the Woods Conservation Reserve (C2366)**

38
39 Lake of the Woods Conservation Reserve is 45,960 hectares in size and was
40 recommended in Ontario's Living Legacy, regulated in 2006. The islands and
41 peninsulas of Lake of the Woods Conservation reserve contain a variety of significant

1 features including provincially rare Bur Oak, Savannah plant communities, regionally
2 significant plants, scenic vistas, spawning grounds, red and white pine (including some
3 old growth), plants with prairie and southern affiliates, and clay soil species (red/green
4 ash). Much of this extensive and unique vegetation is a result of the convergence of the
5 Prairie, Boreal and Great Lakes - St. Lawrence forest regions. Lake of the Woods had
6 extremely high recreation and tourism values

7

8 **Lake of the Woods Waters Conservation Reserve (C501)**

9

10 The Lake of the Woods Waters Conservation Reserve is a water-based reserve,
11 consisting of 1,984 hectares of open waters and wetlands. It is located 15 kilometres
12 northwest of the Town of Rainy River. The area was selected as a candidate under
13 Ontario's Living Legacy to provide continuity of protection for the water between the
14 mainland and the offshore barrier-islands of the Sable Islands Provincial Nature
15 Reserve.

16

17 **Musk Lake Conservation Reserve (C2382)** was regulated on May 21, 2003 and is
18 located on the south shore of the Winnipeg River adjacent to the Ontario-Manitoba
19 border. The shoreline contains scenic portions of the Winnipeg River system and bald
20 eagle nesting sites. It is one of the few locations in this part of northwestern Ontario
21 containing clay and includes mixed forest types on weakly broken bedrock and
22 lacustrine deposits. Musk Lake is designated as a tourism lake.

23

24 **Octopus Creek Conservation Reserve (C2373)** is 608 hectares in size and is located
25 south-east of Octopus Lake, approximately 30 kilometres north of the City of Kenora.
26 The site contains representative landform and vegetation types, including bedrock and
27 strongly broken bedrock with conifer, deciduous, and mixed forests. Octopus Creek
28 Conservation Reserve was regulated on May 21, 2003.

29

30 There are no tourist establishments immediately within the conservation reserve,
31 however, the reserve is part of two Bear Management Areas that are operated by tourist
32 camps in the area. The primary game fish within and around the Octopus Creek
33 Conservation Reserve are walleye and northern pike. Camping, fishing, and hunting
34 are the most popular recreational activities within the Octopus Creek Conservation
35 Reserve.

36

37 **(g) Enhanced Management Areas**

38

39 Enhanced Management Area is a land use category that has been established as a
40 result of Ontario's Living Legacy planning process in order to provide more detailed land

1 use direction in areas of special features or values. The Aulneau Peninsula is the only
2 Enhanced Management Area on the Kenora Forest (Table 7). Management direction
3 contained in the approved management guidance for the EMA will be considered when
4 planning harvest and access activities in the proximity of the EMA. Timber harvesting is
5 currently permitted within the Aulneau Peninsula EMA.

6

7 **(h) Other Uncommon or Notable Natural Resource Features**

8

9 There are no identified provincially significant wetlands on the Kenora Forest.

10

11 **(i) Areas with Access Conditions**

12

13 There are no designated roadless areas on the Kenora Forest. Unless access controls
14 or road decommissioning is identified in this forest management plan (Table FMP-18
15 Road Construction and Use Management), it is expected that existing primary and
16 branch roads will remain open for public use during the 10-year period of this plan.
17 Roads are open for the public to use for any other purpose until road closure, if
18 designated under the *Public Lands Act*.

2.2 Social and Economic Description

2.2.1 Overview of Social and Economic Context

This plan acknowledges that social and economic sustainability is a key component to sustainable forest management. The social and economic description describes the social and economic characteristics of communities that derive substantial social and economic benefits (e.g., employment, municipal taxes) related to the forest industry or forest management activities, forest resource-processing facilities, and other industrial users of the forest. It also accounts for non-industry users of the forest such as naturalists, trappers, recreationalists, and Indigenous communities. This description was considered in the development of the Long-Term Management Direction and the planning of forest operations.

The complete Social and Economic Description, including the demographic profiles, is included in Supplementary Documentation E of the forest management plan.

Forest management activities on the Kenora Forest impact a wide geographic area. There are a number of communities that rely in part on the forest for both social and economic benefits, including employment in woodlands operations such as harvesting, hauling and silvicultural activities, or employment in processing facilities that receive wood fibre from the forest. There are also many indirect benefits generated by forest operations as well as associated revenues and employment across the province.

Direct social and economic impacts occur primarily in the communities of Dryden, Ear Falls, Emo, Kenora, and Barwick (Chapple).

First Nation communities in or adjacent to the Kenora Forest whose interests or traditional uses may be affected by forest management activities include:

- Animakee Wa Zhing No. 37 (Northwest Angle No. 37 First Nation);
- Anishinaabeg of Naongashiing (Big Island);
- Asubpeeschoseewagong Netum Anishinabek (Grassy Narrows First Nation);
- Iskatewizaagegan No. 39 Independent First Nation (Shoal Lake 39);
- Métis Nation of Ontario Region One Consultation Committee;
- Mishkosiminiziibing First Nation (Big Grassy River);
- Naotkamegwanning First Nation (Whitefish Bay);
- Niisaachewan Anishinaabe Nation (Dalles);
- Northwest Angle No. 33 First Nation;
- Washagamis Bay First Nation;

1 Ojibways of Onigaming First Nation (Sabaskong / Onigaming);
2 Shoal Lake No. 40 First Nation;
3 Wabaseemoong Independent Nations (Whitedog);
4 Buffalo Point First Nation;
5 Mitaanjigamiing First Nation; and
6 Wauzhusk Onigum Nation (Rat Portage).
7

8 **2.2.2 Summary of Demographic Profiles**

9

10 Demographic information has been summarized in this section for communities that
11 receive substantial amounts of wood fibre from the Kenora Forest, provide employment
12 for the forest sector, or whose interests or traditional uses may be affected by forest
13 management activities.
14

15 The standardized profiles prepared for the final Kenora Forest Management Plan are
16 based on Statistics Canada's Census Subdivisions, and were prepared by NDMNRF
17 Forest Information Analysts using Statistics Canada's 2016 Census data.
18

19 In order to represent unorganized communities that receive benefits from the Forest, but
20 do not have specific census data tied to each community, the census subdivision
21 Kenora Unorganized (e.g., Perrault Falls) were therefore included. The standardized
22 profiles have a couple of limitations that must be noted. The main data source was the
23 2016 Census, which does not reflect the most recent economic changes. Also, there
24 was no official census data available for the communities of Anishinaabeg of
25 Naongashiing (Big Island) and Northwest Angle No. 33 First Nation at the time of
26 writing.
27

28
29 NDMNRF regional advisors worked with economic development officers and community
30 members from all communities to review and develop the profiles.
31

32 The demographic profiles include a description of demographics and migration, the
33 economic environment, non-industrial uses of the forest, and investment intention for
34 the major communities affected by forest management activities on the Kenora Forest.
35 The summaries are standardized demographic profiles and economic measures, as well
36 as any demographic information provided by communities. These communities are
37 (listed alphabetically):
38
39

Local Communities:

Big Grassy River 35G
 Big Island Mainland 93
 Dryden
 Ear Falls
 Fort Frances
 Kenora 38B
 Kenora, Unorganized
 Kenora
 Lake of the Woods 37
 Lake of the Woods
 Northwest Angle 33B
 Rat Portage 38A

Sabaskong Bay (Part) 35C
 Sabaskong Bay 35D
 Saug-a-Gaw Sing 1
 Shoal Lake (Part) 39A
 Shoal Lake (Part) 40
 Shoal Lake 34B2
 Sioux Narrows – Nestor Falls
 The Dalles 38C
 Wabaseemoong
 Whitefish Bay 32A
 Whitefish Bay 33A
 Whitefish Bay 34A

1

2 The summaries of each standardized profile include the data for population trends,
 3 community diversity, household incomes, and employment by industry for each
 4 community. Each standardized profile also displays the base line social and economic
 5 information which includes the previously mentioned data, along with information on
 6 dwellings, education, official languages, dependency ratios, et cetera. These provide
 7 an indication of reliance on the Forest for a community's well-being, and how resilient
 8 the community is to change resulting from forest management activities over time. The
 9 socio-economic demographic profiles prepared for the Kenora Forest FMP were
 10 prepared by the NDMNRF using 2016 Statistics Canada census data (contained in
 11 Supp. Doc. E).

12

13 For Census districts dependent on wood flow from the Kenora Forest, population,
 14 unemployment rate and forestry employment dependency ratio data is summarized in
 15 Table 8.

16

1 **Table 8 Population, Employment Rate and Forestry Employment Dependency**
 2 **Ratio for Communities Dependent on Wood Flow from the Kenora**
 3 **Forest**

Community	Population (persons)	Employment Rate (%)	Forestry Employment Dependency Ratio (%)
Big Grassy River 35G	235	100	0
Big Island Mainland 93	10	Data not available	
Dryden	7,749	92	16
Ear Falls	995	93	33
Fort Frances	7,739	93	4
Kenora 38B	421	76	0
Kenora, Unorganized	6,737	91	15
Kenora	15,096	93	6
Lake of the Woods 37	62	100	0
Lake of the Woods	230	83	0
Northwest Angle 33B	95	Data not available	
Rat Portage 38A	140	70	Data not available
Sabaskong Bay (Part) 35C	Data not available		
Sabaskong Bay 35D	371	63	Data not available
Saug-a-Gaw Sing 1	98	83	0
Shoal Lake (Part) 39A	391	83	0
Shoal Lake (Part) 40	71	71	0
Shoal Lake 34B2	151	69	0
Sioux Narrows – Nestor Falls	567	80	7
The Dalles 38C	194	86	28
Wabaseemoong	827	74	0
Whitefish Bay 32A	575	78	0
Whitefish Bay 33A	96	56	0
Whitefish Bay 34A	124	78	0

4
 5
 6 This table clearly indicates the significance of the forest industry to Ear Falls, The Dalles
 7 (38), Dryden and Kenora (Unorganized) Census districts. Summaries of community
 8 demographic and economic information are included in Supplementary Documentation
 9 E, Section 2.2.2 with the full demographic and economic reports included in the
 10 associated supplementary documentation appendix.

2.2.3 Industrial and Non-Industrial Uses of the Forest

This section of the forest management plan includes a summary of the industrial and non-industrial uses of the forest organized by sector. The sectors include:

Section 2.2.3.1	Forestry and Wood Products;
Section 2.2.3.2	Recreation and Tourism;
Section 2.2.3.3	Mining, Aggregate and Hydro Generation; and
Section 2.2.3.4	Other Uses.

The detailed description of industrial and non-industrial uses of the forest is included in Supplementary Documentation E – Social and Economic Description, Section 2.2.3 (Description of the Industrial and Non-industrial Uses of the Forest).

2.2.3.1 Forestry and Wood Products

Overlapping Licences and Wood Supply Commitments

Harvesting is carried out by individual Forest Resource License holders and not by the single entity SFL holder. Past harvest commitments of individual shareholders have been honoured and new harvest opportunities will be managed by the SFL company through a process that enhances First Nation and Métis opportunities. Harvest volumes associated with these licenses are allocated annually, to provide opportunities for independent logging operations. All individual Overlapping Forest Resource Licence Agreement licensees (OFRLs) will be identified annually, and have required volumes, by block and species, assigned as needed.

The various wood supply commitments, tree species, and wood volumes, for the Kenora Forest, are described below in Table 9.

There are also many personal fuelwood harvesters in the Kenora Forest who also rely on forest access roads. It is expected the number of personal fuelwood licenses to increase as the population seeks alternate sources of fuel to heat residential homes as fossil fuel based energy prices continues to escalate.

1 **Table 9 Wood Supply Commitments for the Kenora Forest**
2

Wood Supply Commitments			
Processing Facility	Mechanism	Species	Volume (m3 - merchantable)
Weyerhaeuser Company Limited	Ministerial Conditional Commitment	Po	152,000
Weyerhaeuser Company Limited	Supply Agreement	BW	14,500
Prendiville Industries Ltd. (*1)	Supply Agreement	SPF	156,000
E&G Custom Sawing Ltd.	SFL Appendix E Condition	PWR	2,000
Wabaseemoong Independent Nation	SFL Appendix F Condition	Harvest Commitment	7,200
Wood Supply Use - Other			
Processing Facility	Mechanism	Species	Volume (m3 - merchantable)
Prendiville Industries Ltd. (*2)	Business Agreement	PWR	3,250
Prendiville Industries Ltd. (*2)	Business Agreement	SPF	10,700

3

*1. Prendiville Industries Ltd. (Kenora Forest Products) mill shut down and was sold, therefore volumes associated with the Supply Agreement are included in "Open Market" volumes. The new sawmill owner plans to operate the facility, and has requested a supply agreement. Volumes associated with the Prendiville Industries Ltd. (Kenora Forest Products) Mill Supply Agreement are shown as Open Market.

*2. Prendiville Industries Ltd. (Kenora Forest Products) volumes associated with their Business Agreement will be/have been transferred to the new Kenora Sawmill owners. As the facility is currently shut down, volumes associated with this Business Agreement are shown as "Open Market".

4

5 Volume by Type and Facility
6

7

Communities that have received significant volumes of wood from the Kenora Forest over the last ten years include Kenora, Dryden, and Fort Frances. The amount delivered to each destination changed from year to year as impacted by mill closures and market conditions.

10

11 Table 10 provides the volume of wood from the Kenora Forest as utilized by facility over
12 the 10-year period, from April 1, 2012 through March 31, 2019. Details of these wood
13 deliveries are included in Supplementary Documentation E. The 9999 Ontario 'Facility'
14 is a roll up code encompassing all of the non-licensed facilities (e.g., those that use less
15 than one thousand cubic metres per year), onsite uses (e.g., horticulture, mulching),
16

1 and personal use fuelwood volumes. This table also provides the percentage of total
2 volume delivered to each mill during the 10-year reporting period.

3
4 The community of Kenora received the greatest amount of timber, chips or other forest
5 resources from the Kenora Forest due to the proximity of the Kenora Forest in relation
6 to the Weyerhaeuser laminated strand lumber mill situated in Kenora. Over the 10-year
7 period reported, the Weyerhaeuser - Kenora mill received 42% of the delivered fibre
8 from the Kenora Forest, the vast majority being poplar and birch.

9
10 **Table 10 Destinations of Wood from the Kenora Forest 2012-2019**

FACILITY CODE	FACILITY_NAME	LOCATION	Total 10-year Net Merchantable Volume (m3)	Proportion of Volume (%)
1103	Domtar Inc.	Dryden	250,893	22
1129	Oxdrift Tractor Sales Ltd.	Oxdrift	685	0
1201	Resolute FP Canada Inc.	Fort Frances	91,464	8
1221	Manitou Forest Products Ltd.	Emo	6,773	1
1232	531322 Ontario Ltd.	Fort Frances	6,690	1
1240	Norbord Inc.	Barwick	2,821	0
1401	Prendiville Industries Ltd.	Kenora	194,341	17
1410	E.&G. Custom Sawing Ltd.	Kenora	18,304	2
1418	Dave Burt General Contractor Ltd.	Sioux Narrows	1,007	0
1422	Weyerhaeuser Company Limited	Kenora	473,496	42
1425	Wincrief Forestry Products L.P.	White Dog	9,650	1
1510	EACOM Timber Corporation	Ear Falls	30,966	3
1610	McKenzie Lumber Inc.	Hudson	246	0
2590	Resolute Growth Canada Inc.	Thunder Bay	1,793	0
9999	Ontario		28,997	3
Total			1,118,124	100

12
13 Prendiville Industries Ltd. (Kenora Forest Products, Kenora) received 17% of the wood
14 from the Kenora Forest from 2012-2019. These conifer sawlogs were all delivered
15 2015-2019 prior to the mill's shutdown and subsequent sale.

16
17 Deliveries to Domtar Inc. in Dryden have been fairly consistent at around 22% of
18 Kenora Forest delivered volumes (all conifer).

19
20 Resolute Forest Products mill in Fort Frances received 8% of volumes from the Kenora
21 Forest (all conifer pulp and paper fibre) from 2012-2014, all prior to the mill being shut
22 down.

1 E. & G. Custom Sawing Ltd. in Kenora received approximately 2% of the delivered
2 conifer fibre from the Kenora Forest during the 2012-2019 period.

3
4 Approximately 1% of the wood from the Kenora Forest is delivered to Wincrief Forestry
5 Products Ltd. (all conifer).

6
7 Sawmill Residue Destinations -_Destination of sawmill residues (for example, chips,
8 sawdust) produced by sawmills from fibre from the Kenora Forest are delivered to
9 various mills across Northwestern Ontario, including mills in Dryden, Ear Falls and
10 Kenora (see Supp. Doc. E, Table 5 for specific locations).

11
12 Harvest Volumes and Crown Dues

13
14 A summary of the Crown revenues per cubic metre harvested for the 2012-2019 period
15 is presented in Table 11. The average Crown stumpage charge ranged from \$3.59 to
16 \$8.29/m³ over the 10-year period.

17
18 **Table 11 Crown Charges 2012-2019**

19

Fiscal Year	Average Crown timber charges (\$/m ³)
2012/2010	\$ 4.79
2010/2011	\$ 6.65
2011/2012	\$ 5.41
2012/2013	\$ 6.30
2013/2014	\$ 5.07
2014/2015	\$ 3.59
2015/2016	\$ 6.37
2016/2017	\$ 7.28
2017/2018	\$ 7.78
2018/2019	\$ 8.29
AVERAGE	\$ 6.15

20

2.2.3.2 Recreation and Tourism

The provincial parks and conservation reserves in or adjacent to the Kenora Forest are listed and described in Section 2.1.4.3.1.

The tourism industry has been an important component in the Kenora area for a long time. Lodges and cottages were in operation by 1905. At that time the activities were based on hunting, fishing and canoeing opportunities. The Kenora Forest has attracted recreation-based tourism since the late 19th Century due to its variety of natural values. The area continues to be a desired recreational destination for canoeing, boating, fishing, hunting, hiking, snowmobiling, camping and cottaging for the following reasons:

- There are more interconnected lakes, rivers and portages.
- The rugged topography including cliffs, low wetlands, viewpoints and island-dotted lakes provide excellent scenery for summer and winter travelers.
- The area is traversed by numerous trails providing winter recreation opportunities by snowmobile, cross-country ski, or dog sled. In the summer, canoeist and hikers can access remote locations.
- There are numerous cultural heritage values including very old aboriginal heritage sites
- And more recent logging and mining heritage sites.

In the fall of 2003, *The Economic Impact of Tourism in Sunset Country, Ontario* was released by Pannell Kerr Forster Consulting in association with the Canadian Tourism Research Institute. The purpose of the report was to determine the true value of tourism in Sunset Country. The study area is “west of and including Atikokan, with Quetico Park in the east, Lake of the Woods on the west, the United States to the south, and Hudson Bay to the North”. Details from this report are included in Supplementary Documentation E, Section 2.2.4.

Due to the extent of the study area comprising of most of Northwestern Ontario and Northern United States, it was decided to use the Kenora sub-region in this report. This report has not been updated and no other new reports are available. This information is the best available. One notable trend is the conversion of tourist camps to private camps through the condominium process.

There are 362 tourist operators in Kenora District, of which 86 are associated with the Kenora Forest (data from MHSTCI 2021). There are 1,852 units available in the

1 Kenora Forest. A “unit” is defined as any of the following: serviced hotel or motel
2 room, serviced resort rooms, serviced cottages, serviced cabins, serviced outpost
3 camps, housekeeping room, housekeeping suites, housekeeping cottages,
4 housekeeping cabins, housekeeping outpost camps. The impact study reports that
5 54% of the operators have ≥ 10 units, 29% have between 11-19 units and 18% > 20
6 units. In 2001, the average revenue generated by each unit was \$40,000. Of this,
7 Retail and Guest services generated 25% of the revenue with Food and Beverage
8 operations generated 11% of the total revenue. From the Kenora Tourism Sector
9 Profile (2017), it is estimated that in 2014 over 2,000,000 people visited Kenora district
10 which was made up of travelers from Ontario (53%), other Canadian provinces (23%),
11 United States (23%) and overseas (1%). The total spending by all visitors combined in
12 2014 was over \$481 million. Visitors from the US accounted for 43% of that spending.

13
14 The total labour force in Kenora in 2017 was 8,873 workers and 38% (3,314) of the
15 workers are part of the tourism labour force (which would include accommodation
16 services, retail trade, entertainment, and transportation).

17
18 Provincial Parks and Conservation Reserves offer local environmental, social and
19 economic values, although these values can be impacted by land use decisions that
20 occur within, adjacent and beyond the protected area boundary. Provincial Parks and
21 Conservation Reserves provide places where people can enhance their health and well-
22 being through enjoyment and recreational use of the outdoors, while developing a
23 greater appreciation for Ontario’s natural diversity.

24
25 Economic impacts are based on expenditures such as those made by the park on
26 operations and capital, as well as average visitor trip expenditures (camper and day
27 visitor). As well, public and municipal officials should be aware that Provincial Parks
28 help to make their communities attractive for business as well as for tourists and
29 retirees. Communities with attractive waterfronts, low crime, recreational activities and
30 healthy environments are sought out by the retirement community. The park budget
31 (operating and capital) represents a grant or transfer payment from the government to
32 their community. Not all communities have this transfer. The community may also
33 receive grants in lieu of taxes.

34
35 Other recreation activities/facilities in the forest include; Crown land camping areas,
36 snowmobile trails, cross-country ski trails and numerous old forest access roads and
37 mining trails that are utilized by off-road vehicle enthusiasts. There are various
38 NDMNRF public access points and campsites. There is potential for winter tourism
39 activities such as snowmobiling and ice fishing.

Summary of First Nation and Métis Use of Other Resources

First Nation and Métis community members actively use portions of the Kenora Forest for many resource-based activities. First Nation and Métis values for the Kenora Forest are illustrated on Values Map 4.4.

a. Fishing

Several First Nation communities hold commercial fishing licenses on Lake of the Woods and inland lakes. Lake of the Woods and surrounding lakes are used for subsistence fishing by community members. Surrounding tourist lodges provide some employment opportunities for First Nation residents as guides in the sport fishery.

b. Trapping

First Nation community individual hold registered trap lines located all or partially within Kenora District.

c. Wild rice

Wild rice is harvested annually by community members for personal use and resale from various lakes throughout the area.

d. Cultural and Social, other Wildlife

Special sites within the forest are used for traditional cultural purposes such as fasting, vision quests and offerings. The specific location of these sites are known to community members, and the community is encouraged to participate in the forest management planning process to ensure these values are considered in proposed forest management activities.

Certain wildlife species, such as the bald eagle, have a cultural and social significance to First Nation people. The protection and management of these species and their habitats is important.

While the subsistence hunting, fishing, and gathering of resources from within the forest are an integral part of community existence, there are no accurate records of the level of such harvest. The harvest of deer, moose, waterfowl, rabbits and grouse provides an important source of food to community members.

2.2.3.3 Mining, Aggregate and Hydro GenerationMining and Mineral Exploration

There are no operating metal mining operations in the management unit. However, mining and mineral exploration have been, and continue to be, important activities in this management unit. The Lake of the Woods area was the site of intensive prospecting for gold in late 19th and early 20th centuries with eight (8) producing mines resulting and four (4) significant documented deposits remaining. The highly favourable rocks east of Sioux Narrows and Nestor Falls have seen extensive prospecting for gold, copper, and nickel more recently with four (4) significant gold deposits, a copper-gold deposit, and a copper-nickel deposit identified to date. Prospecting for copper, nickel, and cobalt has been active in the Werner Lake area since the 1920's, this work yielded two (2) historic producers, several deposits with remaining documented metal, and at least one new potential producer. Most recently, exploration in the Separation Rapids area beginning in the 1990's has indicated the presence of substantial deposits of lithium, rubidium, and other rare metals and industrial minerals.

Historical metal production occurred between 1896 and 1972 and totaled 41,000 ounces gold, 4,405 ounces silver, 11.5 million pounds of copper, 21.7 million pounds of nickel, 143,386 pounds of cobalt, 36,364 ounces of palladium and 4,223 ounces of platinum.

Within the northern portion of the management unit there is also high potential for building stone, primarily homogeneous, equigranular, low-fractured felsic intrusive rocks with a variety of marketable stone colours. There are seven (7) past-producing quarries and two (2) producing quarries in the area.

In addition to historical and current mineral production, there are documented occurrences of gold, nickel, copper, cobalt, zinc, lead, silver, platinum, palladium, molybdenum, uranium, lithium, rubidium, niobium and tantalum, throughout the management unit.

There are currently an estimated 4,784 active mining cell claims recorded in this management unit as of July 2021, as indicated on the Ministry of Northern Development, Mines, Natural Resources and Forestry's Mining Lands Administration System (MLAS) website. These claims cover an area of 136,458 ha and represent an investment in the management unit of approximately \$239,200 CDN for claim cell registration. In addition, there is an estimated dollar expenditure of \$1.9 million per year related to mineral exploration work required to keep these claims in good standing.

1 Current claim registration targets areas with potential for rare-metals, zinc, copper,
2 nickel, platinum, palladium, gold and building stone.

3

4 Aggregate

5

6 There are 99 active aggregate sites located in the Kenora Forest. Miisun operates six
7 (6) of those for forestry purposes.

8

9 Nelson Granite operates five sites in the production of bulk granite which is shipped
10 to various processing facilities around the world. Granite production is approximately
11 16,000 metric tonnes annually. Full time employment is three.

12

13 The remaining 88 sites produce approximately 15,000 metric tonnes of sand and
14 gravel annually, some are operated by municipalities and others are for private roads.
15 Employment varies from one to five.

16

17 Forest operations are permitted within the area delineated on the site plan for these pits
18 as the aggregate pit permittee retains no rights to the trees. MTO and other commercial
19 pit permittees are on the FMP mailing list and have had the opportunity to review and
20 provide comments on proposed forest operations in the Kenora Forest. Where areas
21 proposed for forest operations are adjacent to an aggregate pit, Area of Concern
22 planning discussions would be initiated with the pit permit-holder. Any mitigative
23 techniques planned are documented in the AOC planning documentation.

24

25 Hydro Generation

26

27 A number of hydroelectric facilities are located within or adjacent to the forest. These
28 facilities are on the English River between Lac Seul and the Manitoba border and on the
29 Winnipeg River between Lake of the Woods and the English River. Four are located
30 within Kenora district and supply power to the area. Two of these are owned by Ontario
31 Power Generation and the other two (both in Kenora) are owned by H2O Power.

32

33 1. Caribou Falls - Caribou Falls consist of three power generating units built in 1958
34 on the English River at the outlet of Umfreville Lake. The Caribou station was
35 the third plant built along the English River which represented just a fraction of the
36 widespread program undertaken to meet the challenge of expansion in mining and
37 also pulp and paper industries.

38

39 2. Whitedog Falls - This facility consists of three power generating units built in
40 1958 on the Winnipeg River at Whitedog Falls.

1
2 3. Kenora Powerhouse and Norman Dam - These generating stations are owned by
3 H2O Power. The Kenora Powerhouse is located on the on the Winnipeg River in
4 Kenora at the outlet of Lake of the Woods. The Norman Dam generating station is
5 located on the Winnipeg River in Kenora.

6
7 Two additional sites owned by Ontario Power Generation are located within the district:

8
9 4. Ear Falls - There are four power generating units at Ear Falls located on the
10 English River at the outlet of Lac Seul. The first unit began operating in 1930.
11 Additional generating capacity is being developed at the Ear Falls GS by adding
12 a new 12.5 MW generating unit capable of generating approximately 52 million
13 kilowatt hours of hydroelectricity per year.

14
15 5. Manitou Falls - This facility is located on the English River where it enters
16 Barnston Lake downstream of Ear Falls. There are five operating units located at
17 this facility. Construction on this facility began in 1953.

18 19 **2.2.3.4 Other Uses**

20
21 Trapping provides seasonal employment for 175 registered traplines in the Kenora
22 Forest. Additionally, there are approximately 17 First Nation Community traplines
23 located with the Kenora Forest. The expected average resources value per trapline is
24 estimated at \$2,440. Since all the trappers work out of their home it would not be
25 appropriate to identify their names in this document. The major fur bearing animals
26 that are of economic importance are beaver, fox, muskrat, lynx, otter, mink, fisher,
27 and marten. Registered trap lines cover the entire Kenora Forest (Values Map 4.4).

28
29 In 2012-2010, the Kenora Forest had 15 licensed baitfish individuals of which all
30 are camp operators operating in 65 harvest areas. Baitfish is consumed locally by
31 the angling industry. The baitfish industry provides supplemental income to these
32 people and compliments the local angling industry. These activities rely heavily on
33 forest access roads in order to conduct their respective harvesting activities. Minnows
34 and leeches are the primary types of baitfish harvested from the Kenora Forest.

35
36 Local residents use the forest for fuelwood cutting; primarily white birch and
37 aspen. Forest management activities can affect other forest resources in a variety
38 of ways. Obvious affects include the loss of terrestrial habitat through road
39 construction and forest removal. There may be short or long-term changes in
40 ecosystem processes that may alter the regenerative course of the landscape and

1 there may be adverse aesthetic impacts on people. There are also beneficial
2 impacts, which include restoration of early successional habitat and improved access
3 for hunters, trappers, anglers, naturalists and baitfish operators.

4

5 There are approximately 241 commercial bear management areas on the forest
6 operated by 23 tourist operators. Most of these areas are accessible from the
7 existing road network on the unit. The bear management areas are distributed
8 throughout the unit except for the areas close to populated centres. Registered bear
9 management areas cover all of the Kenora Forest.

10

11 The City of Winnipeg's (the City's) sole drinking water source is Shoal Lake in the
12 Kenora Forest. The City provides treated water from Shoal Lake to approximately
13 700,000 people and has over 200,000 customer connections.

14

2.3 First Nation and Métis Background Information Report

The following First Nation and Métis communities are within or adjacent to the Kenora Forest and have been identified as having interests in forest management planning:

- Métis Nation of Ontario
- Animakee Wa Zhing No. 37 (Northwest Angle No. 37 First Nation)
- Anishinaabeg of Naongashiing (Big Island)
- Asubpeeschoseewagong Netum Anishinabek (Grassy Narrows First Nation)
- Buffalo Point First Nation
- Iskatewizaagegan No. 39 Independent First Nation (Shoal Lake 39)
- Mishkosimiziibing First Nation (Big Grassy River)
- Naotkamegwaning First Nation (Whitefish Bay)
- Northwest Angle No. 33 First Nation
- Washagamis Bay
- Niisaachewan Anishinaabe Nation (Ochiichagwe'Babigo'Ining Ojibway Nation, Dalles)
- Ojibways of Onigaming First Nation (Sabaskong / Onigaming)
- Shoal Lake No. 40 First Nation
- Wabaseemoong Independent Nations (Whitedog)
- Wauzhusk Onigum Nation (Rat Portage)
- Mitaanjigamiing First Nation.

During the initial stages of the FMP process, all First Nation and Métis communities were invited to select a consultation approach intended to best meet the needs of their respective community. To respect the Métis Nation of Ontario Consultation Protocol for Treaty #3, Lake of the Woods/Lac Seul and Rainy Lake/Rainy River Traditional Territories, NDMNRF has directed correspondence relating the forest management planning to the Region One Consultation Committee. No Indigenous community has developed a separate formal customized consultation approach to date, however the Planning Team did fulfill all requests for meetings, presentations or information from the participating First Nations and Métis communities.

NDMNRF invited the Indigenous communities to identify First Nation and Métis values and participate in the preparation of the draft First Nation and Métis Background Information Reports, or to review and update the existing First Nation and Métis Background Information Reports. In addition, these Indigenous communities were encouraged to provide updated values information to the planning team for consideration in plan development.

- 1
2 The First Nation and Métis Background Information Reports include:
- 3 (a) a summary of the use of natural resources on the management unit, particularly
 - 4 with respect to hunting, fishing, trapping, harvesting of wood for domestic
 - 5 purposes, and gathering;
 - 6 (b) a summary of forest management-related concerns;
 - 7 (c) a summary of the involvement of First Nation and Métis communities in the
 - 8 preparation of the report; and
 - 9 (d) a First Nation and Métis values map.

10
11 Those values that are of importance to the Indigenous communities and that may be
12 affected by forest operations in the management unit will be portrayed on the First
13 Nation and Métis values map, retained at the NDMNRF Kenora District Office.

14
15 First Nation and Métis Community Background Information Reports are included in the
16 FMP supplementary documentation only if a First Nation or Métis community
17 individually agrees to their community's report being included in the FMP. No
18 community provided such permission for their Background Information Report to be
19 included in the FMP. These reports are retained at the NDMNRF Kenora District Office,
20 and are not included in the FMP supplementary documentation.
21

3.0 LONG-TERM MANAGEMENT DIRECTION

3.1 Introduction

FINAL PLAN NOTE: Section 3 was prepared during LTMD development and for the Draft FMP. Significant wildfires in summer 2021 burnt forest primarily in the far northern part of the Kenora Forest. After review of the revised Plan Start 2022 forest land base and the endorsed LTMD, planned operations were subsequently revised for final plan (Section 4), compared to the LTMD (Section 4.9), and the final Determination of Sustainability was revised (Section 5). The analysis of the final planned operations in comparison to the LTMD supported that the LTMD was still valid as developed, would continue to be the basis for operations during this 10-year plan period (Section 4.9). The following LTMD Section 3 is not revised for final plan, however, a **FINAL PLAN NOTE** has been added where a significant change between draft and final plan achievement is identified.

The long-term management direction for the Kenora Forest provides guidance for the levels of access, harvest, renewal and tending activities required to achieve the desired forest and benefits. Development of the long-term management strategy was conducted to balance biological, social and economic objectives over the long-term.

Background information (Section 2), management considerations (Section 3.2), development of inputs for strategic modelling (Section 3.3), information gained through Desired Forest and Benefits consultation (Section 3.4), strategic management zones (Section 3.5) and management objectives (Section 3.6) were considered in the development of the long-term management direction.

The long-term management direction provides a means of assessing the sustainability of the management strategy through the measurement and monitoring of indicators that have been developed for each management objective. Analytical models and tools were used to analyze forest regulation (projected harvest and renewal levels) and their impact on achievement of management objectives. These management objectives, both quantitative and qualitative are based on the desired future forest and benefits.

The Available Harvest Area (AHA) for the 10-year period of this forest management plan is presented by forest unit in Section 3.7.1, as well as the criteria used for the selection of areas for harvest (Section 3.7.2). Assessments of the extent to which plan objectives have been achieved and a preliminary determination of sustainability are summarized and are also included in this section. Management objective achievement

1 is determined by the overall achievement of the established desirable levels and targets
2 (Section 3.7.3).

3
4 The spatial landscape pattern, social and economic assessment and a risk assessment
5 associated with implementation of the Long-term Management Direction are also
6 summarized in Sections 3.7.4 to 3.7.6.

7
8 Primary road corridors required for forest access for the next 20 years (2022-2042) are
9 discussed in Section 4.5.1.

10

11 **3.2 Management Considerations**

12

13 Management considerations are changes to the forest condition (e.g. large natural
14 disturbance, or landscape pattern) or social, economic or environmental concerns that
15 will be considered in the development of the long-term management direction.
16 Management considerations are also taken into account in the planning and
17 implementation of operations.

18

19 Some management considerations were identified from Section 1.2.3 of the *Forest*
20 *Management Planning Manual*, while other management considerations were identified
21 during development of the Long-term Management Direction by the Planning Team.
22 Sources of information on the management considerations included direction from the
23 2012 FMP, new NDMNRF policies and guides, results of consultation efforts, previous
24 forest inventories, the process to update the 2022 forest resources inventory, the
25 Independent Forest Audit, and planning team discussions on primary road access.

26

27 The following significant management considerations were discussed by the Planning
28 Team, and the resulting considerations in the FMP are summarized:

29

30 **Changes resulting from the revised eFRI**

31 FIM 2017 included changes in the content, format and submission requirements for
32 forest inventories. This resulted in challenges in working with data formats or fields
33 between inventories from one FMP to the next, in particular working with new
34 information for multi-tiered strata. The previous FIM included approved technical
35 specifications for the Planning Composite Inventory (PCI) and Base Model Inventory
36 (BMI), whereas with FIM 2017 the approved technical specifications apply to a new
37 Operational Planning Inventory (OPI). The PCI and BMI were prepared and
38 submitted under the FRI Technical Specifications (2017).

39

1 The Kenora Forest's new Forest Resources Inventory (FRI) imagery was acquired in
2 2009 and 2010. The new eFRI was delivered in January 2019 for review by the SFL.
3 The new eFRI has new attributes that took additional time to verify or correct (e.g.
4 understory or overstory tree species composition) and land ownership prior to being
5 utilized in strategic modelling. The Planning Team needed to interpret and adapt the
6 FRI Technical Specifications in order to ensure that the eFRI was usable in
7 development of the LTMD, and to update land ownership information from company
8 records and LIO. These technical challenges did not affect the quality or validity of
9 the final LTMD decisions.

11 Implementation of New Legislation and Policy Direction

12 The *Forest Management Guide for Boreal Landscapes* (BLG) was approved in
13 February 2014, after approval of the 2012-2022 FMP. The Boreal Landscape Guide
14 replaces a number of older documents and forest management guides that previously
15 provided landscape-scale direction for the boreal forest. The Landscape Guide is one
16 of a series of forest management guides used by forest managers when planning and
17 implementing forest management operations. In order to protect or enhance
18 environmental, recreational, and cultural heritage values, the series of guides provides
19 direction to assist forest managers to decide, for example, what areas of forest to
20 harvest (and equally important, what areas not to harvest), how large the harvest areas
21 should be, and what harvesting and regeneration practices to use.

22
23 The Boreal Landscape Guide significantly influenced the LTMD regarding the amount
24 and pattern of forest cover required on the Kenora Forest, as projected in strategic
25 modelling over the next 160 years. The Stand and Site Guide also influenced
26 management considerations. The 2012 FMP included consideration for objective
27 indicators in the (then) draft landscape guide for boreal landscapes, therefore changes
28 required to this 2022-2032 FMP are minimal. Some changes in landscape and stand
29 level considerations for this plan included:

- 30 • Management of BLG Landscape Class areas now replace the previous
31 Selected Wildlife Species habitat approach and management of forest types
32 and ages by plan forest unit.
- 33 • Ontario's Landscape Tool (OLT), that supports the Boreal Landscape Guide,
34 was used to determine desirable levels for management indicators from the
35 BLG. Planning Teams no longer set desirable levels for BLG indicators through
36 analysis of a "natural benchmark" modelling scenario.
- 37 • Previous larger patches of mature conifer retained as "marten core areas" are
38 now replaced with amount and distribution of Mature and Older forest (BLG),
39 and Large, Landscape Patches (SSG).

- 1 • The Stand and Site Guide guides the management of areas for Moose
2 Emphasis Areas (MEAs), and Deer Emphasis Areas (DEAs).
- 3 • Amount and distribution of Young Forest Patches is now guided by the BLG,
4 rather than the *Natural Disturbance Pattern Emulation Guideline* (NDPE).
- 5 • Section 3.6 further describes the development of management objectives and
6 indicators, and the setting of desirable levels for BLG indicators appropriate for
7 the Kenora Forest.

8
9 *Crown Land Use Policy Atlas* (CLUPA) is a web mapping application that is the
10 source of area-specific land use policy for Crown lands. CLUPA information is
11 mandatory for inclusion in FMP development.

12 Just after Stage Two of plan production (after LTMD preparation), the *Forest*
13 *Management Planning Manual* was revised (effective July 1, 2020). Implications of
14 changes in the 2020 FMPM on the 2022-2032 Kenora FMP were discussed with
15 NDMNRF and the Planning Team and were considered prior to draft plan
16 submission.

17 18 **Species At Risk**

19 The Forest Management Plan must discuss any forest dependent Species at Risk
20 (SAR) that may inhabit the Kenora Forest and the contribution and importance of
21 habitat for those species. The *Endangered Species Act* was passed in 2007 with
22 several habitat protection regulations for Endangered Species being draft for future
23 implementation. The known locations of occurrences of flora and fauna Species at
24 Risk were reviewed on the Kenora Forest in order to determine if operations would
25 impact these values. Forest dependent Species At Risk that have been known to
26 occur or have the potential to occur in the Kenora Forest were identified in Section
27 2.1.4.1. All known Species at Risk have their habitat managed in the plan using
28 species specific guidelines and/or by recognizing specific habitats as values and
29 developing appropriate area of concern (AOC) prescriptions (Table FMP-11) or
30 Conditions on Regular Operations (CROs, Section 4.2.2.2).

31 32 **Indigenous Interests**

33 Indigenous interests may be expressed both as the interests of First Nation or Métis
34 communities and the interests of First Nation or Métis individuals and organizations.

35
36 The following Indigenous communities are within or adjacent to the Kenora Forest
37 and have been identified as having interests in forest management planning:

- 38 • Métis Nation of Ontario
- 39 • Animakee Wa Zhing No. 37 (Northwest Angle No. 37 First Nation)
- 40 • Anishinaabeg of Naongashiing (Big Island)

- 1 • Asubpeeschoseewagong Netum Anishinabek (Grassy Narrows First Nation)
- 2 • Buffalo Point First Nation
- 3 • Iskatewizaagegan No. 39 Independent First Nation (Shoal Lake 39)
- 4 • Mishkosimimiziibing First Nation (Big Grassy River)
- 5 • Mitaanjigamiing First Nation
- 6 • Naotkamegwanning First Nation (Whitefish Bay)
- 7 • Northwest Angle No. 33 First Nation
- 8 • Washagamis Bay
- 9 • Niisaachewan Anishinaabe Nation (Ochiichagwe’Babigo’Ining Ojibway
- 10 Nation, Dalles)
- 11 • Ojibways of Onigaming First Nation (Sabaskong / Onigaming)
- 12 • Shoal Lake No. 40 First Nation
- 13 • Wabaseemoong Independent Nations (Whitedog)
- 14 • Wauzhusk Onigum Nation (Rat Portage)

15

16 The interests and traditional uses of the forest by Indigenous communities need to

17 be identified by the communities in order to be considered in the planning process.

18 The NDMNRF took the lead role in contacting the communities to make them aware

19 of opportunities to provide input and stay abreast of the plan development. The

20 forest management planning process directs specific involvement for Indigenous

21 communities and representatives of those communities.

22

23 NDMNRF contacted all 15 Indigenous communities and the Métis Nation of Ontario

24 and offered them the opportunity to participate in the Kenora Forest planning

25 process. This approach allowed the communities to decide on ‘adjacency’ and

26 desired level of involvement. This exercise was intended to assist NDMNRF in its

27 understanding and consideration of Indigenous community interests and traditional

28 uses on the Kenora Forest.

- 29 • The Indigenous communities were invited to select a representative to sit as
- 30 part of the FMP Planning Team and/or participate on a First Nation or Métis
- 31 Task Team, to have enhanced direct involvement throughout plan
- 32 development.

33

34 Indigenous communities are invited to participate in the identification of First Nation

35 or Métis community values, regardless of whether or not the values are shared with

36 NDMNRF, in order that any identified values could be considered during operational

37 planning of forest management activities. Indigenous communities were also invited

38 to participate in the development of their First Nation or Métis Background

39 Information Report.

1
2 Indigenous communities were invited to determine an appropriate consultation
3 approach for their community. Timing of the approach was left to each community.
4 NDMNRF repeatedly re-iterated their offers to participate in tailored consultation
5 throughout all stages of FMP development.
6

7 When requested by specific Indigenous Communities, the Planning Team presented
8 plan information at community meetings at various times during plan development.
9 Each presentation was tailored to the topics and level of detail that was requested by
10 the community.
11

12 Notification about the planning process was given as follows:

- 13 • All Indigenous communities and the Métis Nation of Ontario received
14 notification at each stage of Public Consultation.
- 15 • A direct invitation to get involved was mailed to all known values-holders and
16 those requesting to be on the mailing list at each stage of Public Consultation.
17 Indigenous values-holders typically include individuals or organizations that
18 are licensed trappers, camp operators, as well as collectors of wild rice and
19 collectors of forest products.
20

21 The forest management planning process directs specific involvement for First
22 Nation or Métis Community Consultation and this direction was followed for the 2022
23 Kenora Forest FMP development.
24

25 **Climate Change**

26 The Planning Team discussed the issue of potential impacts of climate change and
27 whether there were changes in management strategies that needed to be included
28 in the forest management plan to mitigate negative impacts. Scientists continue to
29 monitor and analyze the occurrence and impacts of climate change. Provincial
30 direction is just now being developed and incorporated into policy. Research work on
31 seed zones and climate change will be monitored and adapted through the plan
32 period and policy changes.
33

34 The Boreal Landscape Guide directs forest management to manage toward a forest
35 age and tree species composition within a range of natural variation, which is
36 expected to maintain the above ground forest's carbon balance within an expected
37 range of natural variation. By maintaining tree species mixes, ages, and patch sizes
38 within a natural range, it is assumed that this will enable forest ecosystems to be
39 resilient (i.e. having the capacity to adapt) to changes in temperature and

1 precipitation. The BLG is reviewed every ten years and revised when appropriate to
2 reflect new knowledge and experience.

3
4 To date, limited direction has been provided by NDMNRF to FMP planning teams on
5 specific strategies to be implemented to mitigate potential impacts of climate
6 change. On a trial basis, a process is in place to consider assisted migration of tree
7 seed north for use on the Kenora Forest, from further south seed zones. In future
8 forest management plans, if supported by specific policies and scientific data,
9 applicable management strategies will be incorporated into LTMD development.

11 Major Changes in Land Base

12 There have not been any revisions to the land base since the preparation of the
13 2012 FMP. New inventories resulted in minor deviations along the FMU boundary
14 edges due to the accuracy of information being collected. The revised planning
15 inventory (including ownership and forest stand attributes) was included in the initial
16 strategic modeling land base and reported in FMP land base tables.

18 Recent, Large Natural Disturbances

19 There was a large fire in 2018 (Fire #71) mostly in the northern caribou management
20 zone of the Kenora Forest. This fire and other smaller fires since 2012 were
21 updated in the planning composite inventory (PCI). In the caribou zone, the naturally
22 disturbed young age classes were considered in the development of the Dynamic
23 Caribou Habitat Schedule and operability timing of DCHS blocks. Any natural
24 disturbance areas were included as part of the available land base and in eligibility
25 criteria and selection criteria for harvest operations.

26 **FINAL PLAN NOTE:** In 2021, several wildfires burnt area in and adjacent to the
27 Kenora Forest. Most notably, Fire Kenora 51 (KEN51, started June 2021) burnt
28 approx. 200,600 ha from the Umfreville Lake – Werner Lake area and to the north
29 (109,900 ha on the Kenora Forest). Kenora 51 burnt most of the mature forest in the
30 Kenora Forest caribou zone. After starting in May 2021, KEN27 burnt 4,480 ha in
31 MEA4, and two other smaller fires in the Willard Lake area burnt 2,062 ha (KEN25)
32 and 1,162 ha (KEN30). A comparison of Plan Start 2022 conditions (LTMD, and with
33 2021 fires) was added to the final FMP to document FMP consideration for these
34 2021 wildfires.

36 Harvest Plans In Previously Un-accessed Tourism Areas

37 On the Kenora Forest, there are three primary roads: Maybrun, Cameron and Trilake
38 Roads that have travel restrictions in place, as part of their use management
39 strategy. These road systems, as well as the secondary and tertiary roads coming
40 off of them, have restricted travel conditions to protect remote tourism and lake trout

1 values. The travel restrictions for these roads have been in place since the mid-
2 1980s.

3
4 Harvest plans in more northern remote tourism areas continued in the development
5 of the 2022 LTMD, as was the case in prior plans. There was a significant amount of
6 work done on Resource Stewardship Agreements (RSAs). Area of concern
7 prescriptions have also been created prior to and during RSA discussions that took
8 into consideration many tourist concerns. Many tourist operators did not enter into
9 an RSA during development of this plan, however their concerns were captured in
10 current AOC planning through their comments and discussions with the company.
11 This FMP also required new 20-year primary roads to the north and northwest to
12 access the caribou management zone. Primary road development was discussed
13 during LTMD development and reviewed by the public.

14 15 **Shifts In Markets Or Utilization**

16 Regionally, uncertain economic times are being experienced by the forest industry.
17 Fortunately, there is currently a strong demand for both conifer and hardwood
18 harvest volumes from the Kenora Forest. Mixedwood harvest areas must be
19 carefully planned to ensure a steady equal flow of hardwood and softwood to satisfy
20 the mills and match the availability on the land base. In this FMP, harvest volumes
21 were estimated in the strategic modeling through forest unit yield curves. The
22 planning team analyzed regionally provided wood supply targets during strategic
23 planning scoping analyses to determine potential and sustainable timber production
24 levels from the Kenora Forest. The Long-term Management Direction included
25 specific timber volume targets balanced with other management objectives for the
26 Kenora Forest. Operational planning included harvest allocations with resulting
27 volumes related to the proposed mill utilization and potential stumpage revenues.

28 29 **Funding For Silviculture**

30 Silviculture continues to be conducted as efficiently and quickly as possible following
31 harvest depletions. This provides with the most secure supply of wood fibre for the
32 SFL. This will continue to be the focus as it has been in the past. Funding for
33 silviculture has not been an issue to date. In this FMP, the renewal assumptions
34 were included in the strategic modelling inputs reflecting renewal treatments, costs
35 and anticipated results. Allowable silvicultural renewal options were identified in the
36 Silvicultural Ground Rules Table FMP-4. Proposed renewal activities for the plan
37 period were forecast in Table FMP-17, and the assessment of regenerated success
38 during the plan period was forecast in Table FMP-20.

Recent, Or Anticipated, Insect Pest Infestations Or Tree Diseases

In recent years, regionally there have been Jack Pine Budworm and Spruce Budworm infestations that have impacted tree health and expected future merchantability of harvest volumes in certain areas. Forest health surveys are conducted on a regular basis by the NDMNRF forest health monitoring program and updates are made available annually. In this FMP, forest management planning for the control or salvage of insect damaged or diseased timber will occur in the future, if warranted on the Kenora Forest. The current forest condition does not require protection or salvage operations to be planned during this 10-year plan period.

Modified Fire Response

The *Wildlands Fire Management Strategy* (MNR 2014) requires a balanced approach to fire management that ranges from prompt and complete suppression, to monitoring fires that renew and sustain the forest without threat to human values. Wildland fire can be used as a tool where safe and appropriate, to support land and resource management objectives. The planning team through dialogue with fire management representatives identified areas where a modified response may apply. Section 4.8.3 outlines the Modified Fire Response Plan for the Kenora Forest.

A stand replacing or site preparation event, such as wildland fire, would benefit certain areas on the Kenora Forest.

“Allow Fire” Areas are those with the following parameters:

- Island or peninsula areas in which there are few or no values at risk located along Lake of the Woods, Big Sand Lake lakeshore; and
- Areas affected by forest insects or diseases such as the Aulneau Peninsula.

There is a high risk of adverse impacts from wildland fire to areas that are in or adjacent to important harvest areas, wildlife values, and/or social and public values.

“Limit Fire” Areas are harvest areas scheduled for harvest within the next 20 to 40 years.

- Two blocks of mature to over mature forest for harvest in the B period (2022-2042, DCHS Blocks B1 and B2). These areas are of high strategic (objective achievement) and economic importance.
- In addition, the entire KF caribou zone (DCHS) is strategically important to contribute caribou habitat functions and sustain the caribou population for adjacent Woodland Caribou Provincial Park, Red Lake Forest, and Whiskey Jack Forest, all of which have experienced significant disturbance in the past and are currently recovering large patches of habitat. The Kenora Forest is

1 expected to sustain a caribou population which will contribute re-occupancy
2 of caribou to these surrounding recovering landscapes. The Kenora Forest
3 also shares a caribou population with neighboring Manitoba and is the
4 connecting middle section of the Sydney Caribou Range. The entire Kenora
5 Caribou zone is a candidate for “Limit Fire” response.
6

7 **Other Planning Initiatives**

8 There are no other planning initiatives that impact development of this FMP.
9

10 **Independent Forest Audits (IFA)**

11 IFAs are required on each SFL at least every five years. The last IFA was
12 conducted on the Kenora Forest in 2018. The IFA contained some findings that
13 pertained to the development of the forest management plan (numbered by IFA
14 Finding #).
15

16 **#1 Outdated Indigenous Community Background Information Reports**

17 How addressed in FMP:

- 18 • During FMP development, NDMNRF District staff reviewed the requirements
19 of the Forest Management Planning Manual and ensured that all of the
20 requirements were met.
- 21 • NDMNRF District staff and Miisun worked collaboratively with Indigenous
22 communities in an effort to update the reports during FMP development.
23

24 **#5 Company-identified changes in the aquatic GIS layer were not processed.**

25 **#6 MNRF delivered ownership data boundaries do not line up correctly with** 26 **the same boundaries in the 2018 eFRI.**

27 How addressed in FMP:

- 28 • These findings were addressed prior to approval of the 2022 FMP Planning
29 Composite Inventory (PCI).
- 30 • Water layer amendments were updated in Land Information Ontario (LIO).
- 31 • Ownership information was reconciled prior to approval of the PCI.
- 32 • The revised ownership information was used for all FMP land base tables and
33 for the Base Model Inventory for strategic modelling and LTMD projections.
34

35 **#8 Low implementation rate of planned tending (cleaning/competition control)** 36 **during 2012-2018 period**

37 How addressed in FMP:

- 38 • Miisun staff discussed required tending activities with Miitigoog member
39 communities.
- 40 • Miisun conducted some tending activities during Phase II of 2012 FMP.

1 • The strategic silviculture program for the 2022 FMP was reviewed prior to
2 development of the LTMD projected renewal transitions and associated costs.
3 The expected amount of required tending was determined for different site
4 types on the Kenora Forest. The LTMD projected renewal program, including
5 tending, is expected to be implemented during this 2022-2032 plan period.
6 Actual renewal treatments to be conducted will be confirmed before and/or
7 after harvest operations by a Registered Professional Forester. Tending will
8 be applied to sites that require hardwood or grass vegetation control in order
9 to promote conifer tree regeneration and survival. Actual areas
10 receiving specific regeneration treatments, including tending, are reported to
11 NDMNRF annually.
12

13 **#13 A number of 2012 FMP objectives and targets are unlikely to be achieved.**

14 How addressed in FMP:

- 15 • Miisun, NDMNRF and the Planning Team reviewed 2012 FMP objectives and
16 targets during development of the 2022 Objective and indicators.
- 17 • Management objective indicators required by the FMPM, Boreal Landscape
18 Guide and the Stand and Site Guide were included in the LTMD and
19 assessed for objective achievement (Table FMP-10).
- 20 • Desired Forest and Benefits meetings with the Local Citizens' Committee and
21 interested Indigenous communities were held to identify other issues for
22 consideration in LTMD. The Planning Team discussions determined whether
23 additional objective indicators were needed, resulting in a final list of
24 management objective indicators for this 2022 FMP.
- 25 • Desirable levels were investigated and finalized based on provincially set
26 parameters, strategic modelling projections and reasonable expectations for the
27 Kenora Forest.

3.3 Base Model

The base model serves as the common starting point for strategic modelling and analysis for the development of the LTMD.

The assumptions used to develop the base model inventory and base model related to the land base (e.g., ecological zones, land use decisions), forest dynamics (forest succession, growth and yield), available silvicultural options, biological limits, and other model assumptions identified by the planning team are included in Supplementary Documentation B – Analysis Package.

Section 5 (Subsections 5.1 to 5.2) of Supplementary Documentation B – Analysis Package provides the details of the development of the base model inventory, and Section 6-8 include details on the base model.

The planning team reviewed and confirmed or revised model assumptions utilized in the 2012-2022 FMP using current scientific research and recent survey and reported information for the Kenora Forest.

An analysis of past silviculture performance provided the default silvicultural assumptions for the base model. The model assumptions were reviewed with consideration of the best available science and information, new legislation, regulation and policy, and changes to forest condition and land base.

3.3.1 Analysis of Silvicultural Activities

The Forest Management Planning Manual requires that a registered professional forester (R.P.F. licensed by the Ontario Professional Foresters Association) undertake an analysis of silvicultural activities for certain Annual Reports (FMPM 2009 required this analysis in the Year Seven Annual Report, and the FMPMs 2017 and 2020 require this analysis in the Year Five Annual Report). This analysis was completed by a Miisun Registered Professional Forester for inclusion in the Year Seven Annual Report (2018/2019) for the Kenora Forest. Excerpts from this silvicultural analysis follow:

Planned silviculture targets are based upon the proposed harvest levels and therefore any deviation in actual harvest levels directly impacts the actual silviculture levels. Currently there is no backlog of silviculture, as the silviculture levels closely relate to the harvesting levels. None of the target levels for silviculture were met as a result of the reduced harvest levels. As of the Year 7 Annual Report, only 20% of the 2012 FMP for

1 the Kenora had been harvested. This is not a new trend as over the previous three
2 FMPs the actual harvest never exceeded more than 44% of the planned area and was
3 as low as 16% for one FMP. Subsequently, the renewal and tending areas follow the
4 same pattern.

5
6 The amount of actual Natural regeneration compared to the forecast levels over the
7 previous three FMPs and the current FMP range between 15% all the way up to 55%.
8 The high of 55% of planned natural regeneration was achieved during the 2006 FMP
9 and indicative of the increased use of poplar on the Kenora Forest and the collapse of
10 the local conifer markets. The harvesting operators were forced to change harvesting
11 patterns to remain viable. This was a short-lived trend and the level in the current plan
12 is 17% of the planned level, which is in line with the actual harvesting levels.

13
14 Actual planting levels range from 28% in the current FMP to a 76% during the 1996-
15 2001 FMP. The current planting level in the 2012 FMP period is indicative of the
16 harvesting levels with both remaining in the 20% range of planned levels. The peak of
17 76% is related to the time period when this level of planting occurred. During the 1996
18 FMP the primary driver of the local forest economy was conifer and as such a much
19 higher percentage of area was renewed through planting.

20
21 The planned and actual areas for seeding also vary greatly. During the 1996 FMP there
22 was no seeding conducted compared to the 2006 FMP where 85% of the planned
23 seeding was completed. Current levels of seeding are approximately 14% of planned
24 and this is in line with harvesting levels of conifer, when one accounts for the slightly
25 higher level of actual planting.

26
27 Tending levels have seen a drastic change over the last seven years. Previous to the
28 current plan the 2006 FMP achieved 57% of the planned tending (although the FMP
29 included a very low level of tending). There has been minimal tending in the 2012 FMP
30 and this is a trend that is expected to continue as there is social push-back from
31 Indigenous communities and the public on the use of herbicides in the Kenora District.
32 As chemical tending has not been completed on the Kenora Forest since 2014 and will
33 most likely be used minimally moving forward, the planned levels will need to be a major
34 consideration when the 2022-2032 FMP is created.

35
36 The levels of actual site preparation activities compared to planned levels have been
37 relatively stable over the previous three FMPs and into the current FMP. The current
38 FMP shows that 36% of the planned site preparation has been completed, which is
39 higher than what would be expected when compared to the harvest levels. The main
40 reason for the additional site preparation during the current FMP is that it is being used

1 to give seedling the best start possible with the limited tending that is expected.

2

3 The overall level of achievement for all renewal operations is directly related to
4 harvesting operations. As the harvest levels decrease, so does the area requiring
5 silvicultural treatment. If the planned harvest area is not completed then there will be a
6 delay in the achievement of desired future forests, the associated wood supply and
7 preferred wildlife habitat are that was planned to be achieved through post-harvest
8 renewal and tending activities.

9

10 Registered Professional Foresters on the Planning Team (both Miisun and NDMNRF),
11 as well as R.P.F.s contributing as Plan Science Advisors from NDMNRF NWR Region,
12 developed and agreed on the growth and yield assumptions used in the Base Model
13 inputs and silvicultural options (see Supplementary Documentation B – Analysis
14 Package, Section 6).

15

16 **3.3.2 Analysis of Past Silvicultural Performance**

17

18 The analysis of past silvicultural performance was conducted by a Miisun Registered
19 Professional Forester with assistance from other R.P.F.s. The analysis included a
20 summary of past silvicultural treatments by forest unit and the resulting success of those
21 silvicultural treatments (to specific future forest units and silvicultural intensity/yields).
22 This analysis informed the projected renewal pathways included in the strategic
23 modelling. The analysis of past silvicultural performance and the projected silvicultural
24 options were reviewed by NDMNRF R.P.F.s on the Planning Team and Regional
25 Science and Plan Advisors prior to being included in the Base Model inputs.

26

27 Silvicultural Options, including the Default Post-harvest Renewal Transitions (PHRT),
28 are documented in Supplementary Documentation B – Analysis Package, Section
29 6.2.3.3. The Post-harvest Renewal Transition Rules are also included in Table FMP-5.

30

31 A systematic analysis was used to determine the post-harvest renewal transitions
32 (PHRT) for the strategic model which utilized the draft “*MNRF Implementation Direction
33 for Using Past Silvicultural Performance to Develop FMP Assumptions for Post-harvest
34 Succession*” to inform this process. Past silvicultural information for successfully
35 established renewal areas from the inventory was analyzed to summarize actual
36 establishment success by forest unit.

1 The strategic modelling inputs for the SFMM model included using predetermined post-
2 harvest silviculture transitions that were based on analysis units (subdivisions of plan
3 forest units) that identified pre-existing conditions that could influence post-harvest
4 succession (i.e. marginally higher hardwood content that could require additional
5 tending treatments for conifer regeneration, or that could lead to a future forest unit at
6 establishment assessment that is more hardwood dominated if tending was not
7 applied). These predetermined transitions included using an appropriate forest unit
8 assignment in the post-harvest situation based on the information gained in the year
9 seven annual report analysis of silviculture trends. Each post-harvest transition also
10 includes a predetermined assignment of an appropriate yield curve based on the plan
11 forest unit. Each plan forest unit yield curve was cross-compared to the 2012-2022
12 FMP yield curves to compare similarities and differences to ensure plan to plan
13 assumptions were consistent with expected yield results. Likewise yield curves were
14 compared with local operational knowledge.

15
16 Projected post-harvest renewal transitions are consistent with the analysis of past
17 silvicultural performance, and are consistent with the approved silvicultural guide. The
18 2001 and 2022 inventories used for this analysis were of substantial size and generally
19 had strong data so no enrichment was needed to support a post-harvest renewal
20 transition, direction in silvicultural guides were followed and included in default
21 transitions.

22
23 Silvicultural strategies for this plan period were discussed, and renewal transition
24 proportions resulting PLANFU-AU-Treatment combinations were compared against the
25 default rules. Where the combined renewal transition proportions were significantly
26 different from the default transition rules, review and adjustment was warranted to
27 address poor transition data. Most notably, herbicide use was minimal to non-existent
28 during the 2006 – 2019 timeframe used for development of the default PHRT
29 transitions. This management strategy has changed and herbicide use will be
30 undertaken during the 2022-2032 plan period to assist in management objective
31 achievement according to Boreal Landscape Guide direction.

32
33 As a result, an adjustment to the default PHRT rules used in SFMM modelling was
34 made for the CMX, HMX, HRD, POD, and PRW forest units in anticipation of increased
35 success rates of planting and seeding of conifer species, and increased implementation
36 of tending in the 2022-2032 FMP. As no adjustments were made to the default that
37 were not supported by data, the development of a monitoring program for adjustments
38 that were not supported by data was not required.

39
40 FMP Section 4.2.2.1 Silvicultural Ground Rules details the strategic renewal transitions
41 planned for this FMP period (documented in Table FMP-4).

3.4 Desired Forest and Benefits

As part of the forest management plan objective setting process, it is necessary to have an understanding of the forest structure and composition, and the goods and services, which are desired from the forest to achieve a balance of social, economic and environmental needs. The desired forest and benefits (DFB) are developed considering the background information available, and include the benefits identified locally by the planning team and the Local Citizens' Committee, with input from the public. Some desired forest and benefits (DFB) are inherently suggested by the *Crown Forest Sustainability Act* (CFSA), the *Forest Management Planning Manual*, NDMNRF guidelines (e.g. *Forest Management Guide for Boreal Landscapes*); provincial policy (e.g. *Old Growth Policy for Ontario's Crown Forests*) or other direction.

Two meetings were held in November 2019 with the Métis Nation of Ontario (Nov. 13th) and Kenora Local Citizens' Committee (Nov. 20th) to initiate development of the desired forest and benefits for the 2022-2032 Kenora Forest FMP. The meetings provided participants with background information on the forest, an overview of landscape level guidelines, review of objectives from the 2012-2022 FMP, and discussion of current socio-economic considerations. Participants were also presented with an initial draft of objectives and indicators for the 2022-2032 FMP, that were prepared with consideration of current policy and forest management direction. These draft objectives were a starting point for further DFB discussion and revision. Comments from participants of the meetings were recorded during the meetings, and a questionnaire was distributed after the meeting for any additional comments. Additional information was presented to other Indigenous communities as requested, such as a summary of DFB information and draft objectives for discussion with community members.

The planning team reviewed the desired forest and benefits meeting comments and reviewed the LTMD Task Team analysis of how each desired forest and benefits would be addressed in the FMP, or if they were "out of scope" of the FMP. The DFB meetings and comments did not result in any additional management objective indicators being added to the set of proposed indicators. The Planning Team discussed Indicators and desirable levels were rationalized in the context of overall objective achievement and forest sustainability (Section 3.6 and Section 3.7).

Supplementary Documentation K – Summary of Public Consultation includes a summary of the Desired Forest and Benefits meeting comments with the LCC.

Desired Forest and Benefits comments received are summarized below, with reference to how those comments were considered in management objectives or



1 desired levels in the LTMD, or elsewhere in development of the FMP. Comments are
2 broadly grouped by topic, and are not listed or ranked in any specific order or priority.

4 **1. Strategic Forest Access and Harvesting Areas:**

- 5 • SFL should access new areas
- 6 • cannot write-off areas like the Aulneau Peninsula and northern portion of
7 Kenora Forest

8 How Addressed in FMP:

- 9 • Stage 2 LTMD: Use of operational zones (subunits) in strategic modelling
10 to allow inclusion of management decisions for timing of access and
11 harvest. Strategic and operational management zones will be discussed
12 and rationalized in supplementary documentation. These areas are part
13 of the land base available for timber production. LTMD includes proposed
14 primary road corridors for 20-year period.

16 **2. Climate Change Mitigation:**

- 17 • Concerns about climate change and the impacts of a changing
18 environment on renewal and the future forest condition.
- 19 • interest in assisted seed migration and potential for planting trials of more
20 southern tree species.

21 How Addressed in FMP:

- 22 • No specific provincial policy on how to address climate change in FMPs
23 yet. Stage 3 Operational Planning: Silvicultural strategies for renewal in
24 plan text. Provincial direction is being updated to allow for some seed use
25 outside home seed zone, but with prior approval and rationalization.

27 **3. Operations on the Aulneau Peninsula:**

- 28 • Interest in removing the Crown Land Use Policy Atlas (CLUPA)
29 restrictions on Aulneau Peninsula to allow all-season roads (more viable
30 for forestry operations)
- 31 • used to have highest moose densities anywhere. The Aulneau needs
32 forest access for wildlife habitat management.

33 How Addressed in FMP:

- 34 • CLUPA change to road restrictions (for forestry operations or hunting
35 opportunities) is outside the scope of the FMP. Stage 2 LTMD: If no
36 access and harvesting is strategically planned, the area may be
37 considered as a Modified Fire Response Area (allow fires to burn, except
38 where impacting First Nations, camps, or proximity to Sioux Narrows).
39 Modified Fire Response Areas are discussed and documented in FMP
40 text.

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4. Forest Biodiversity:

- Support expressed for landscape and diversity patterns to represent natural patterns as much as possible (while meeting other objectives).

How Addressed in FMP:

- Stage 2 LTMD: The Boreal Landscape Guide (BLG) requires that planning be undertaken to move the Kenora Forest towards and then maintain within the Simulated Range of Natural Variation (SRNV). The SRNV is documented in associated BLG science packages. Multiple BLG objective indicators are included in the FMP for forest composition, structure, and pattern, to ensure movement towards the natural state.

5. Fire as a tool for forest regeneration:

- desire to see fire used to treat the land quicker than possible via forest operations (Aulneau Peninsula, in particular)

How Addressed in FMP:

- Stage 2 LTMD: Modified Fire Response Area (allow fires to burn, in certain areas/under specific conditions). Modified Fire Response Areas are discussed and documented in FMP text. Stage 3 Operational Planning: Consider prescribed burning as a silvicultural strategy. If operationally applicable, include in FMP text and/or Silvicultural Ground Rules (Table FMP-4). Any burning included in Renewal Table FMP-17.

6. Red Pine and White Pine, Cedar:

- There is limited local demand for red pine and white pine volumes
- In mixed Red Pine / White Pine scenarios, a higher proportion of incidental Pw should be left (i.e. beyond minimum wildlife retention parameters described in the Stand and Site Guide).
- focus on renewal of red pine and white pine
- consider varied harvest methods to promote white pine and cedar regeneration
- maintain at least the current amount of red pine and white pine on the landscape

How Addressed in FMP:

- Volumes: Stage 2 LTMD: Strategic modelling can track volumes by tree species (used for harvest targets, and/or used to reflect volumes left unharvested during harvest operations to promote red pine and white pine). Strategic modelling to plan for the retention of all incidental red pine and white pine encountered in harvest blocks outside PRW forest unit. Enhanced unharvested trees for Wabaseemoong Stewardship Area

1 strategically planned and operationally implemented. Stage 3 Operational
2 Planning: Planned wood utilization (tree volumes by mill).

- 3 • Forested Area: Stage 2 LTMD: Strategic renewal options are included in
4 Table FMP-4 Silvicultural Ground Rules. Can consider alternate treatment
5 options being included for forest units with white pine and cedar
6 components. Boreal Landscape Guide objective indicators are required
7 for all ages red pine and white pine, and old growth Red Pine and White
8 Pine stands (with associated desirable levels to increase amounts).

10 7. Value of Cedar and White Birch trees and stands:

- 11 • Cedar is culturally significant
- 12 • Cedar groves and high-quality' individual cedar trees need to be identified
13 and protected.
- 14 • Manage large intact stands in a way that will maintain that feature on the
15 landscape.

16 How Addressed in FMP:

- 17 • Stage 2 LTMD: Strategic modelling can track volumes by tree species (to
18 reflect volumes left unharvested during harvest operations). Enhanced
19 unharvested cedar trees for Wabaseemoong Stewardship Area
20 strategically planned and operationally implemented.
- 21 • Stage 3 Operational Planning: Incidental cedar and birch may be
22 identified as unharvested volume in certain forest units, operational
23 planning for harvest.
- 24 • The quality of birch tree is important for this specific use - operational
25 planning consideration (tree and stand qualities).

27 8. Wildlife Habitat and Values - Ungulates:

- 28 • need a balance i.e. deer where there should be deer, moose where there
29 should be moose and elk where there should be elk.
- 30 • more browse habitat needed
- 31 • The protection of key habitat types important to the survival of ungulates
32 during severe conditions was important and noted by the entire group.
- 33 • Moose: Concerns around moose population crisis and cumulative
34 negative impacts of roads (on caribou also).
- 35 • Deer: There are fewer deer outside of town (i.e. all the deer have moved
36 into town). Hunting opportunities for white-tailed deer have declined in
37 recent years. Interest in protecting the herd outside of town.
- 38 • Elk: Consideration for Elk Habitat should be mandatory.

39 How Addressed in FMP:



- 1 • Stage 2 LTMD: Cervid Management Zones are used to determine
2 strategic zones for modelling and forest management for focus of
3 ungulates in different or overlapping areas. Some zones have strategic
4 landscape level management (e.g. caribou zone), and others have
5 operational stand level requirements (e.g. moose, deer, elk). Decisions
6 are documented in FMP supplementary documentation.
- 7 • Boreal Landscape Guide indicators serve as metrics to assess habitat for
8 very large groups of species. BLG indicators require management for a
9 broad range of forest types, age classes and forest pattern to address
10 varied wildlife habitat needs (assessed through required objective
11 indicators: Browse habitat reflected in: Landscape Class area, young
12 forest area, young forest patch size distribution, and browse habitat in
13 Moose Emphasis Areas. Winter survival habitat reflected in: mature and
14 older forest area, large landscape patches of mature and older forest,
15 upland conifer forest.
- 16 • mandatory objective indicators are reported for density of SFL primary and
17 branch roads, and area of available forest. If roads construction exceeds
18 road decommissioning, the road density indicator will increase, and the
19 available forest area indicator will decrease.
- 20 • Stage 3 Operational Planning: Varied harvest pattern considerations and
21 road use management strategies are used to promote wildlife habitat
22 management in specific areas. Provincial forest management guidelines
23 are followed for ungulate habitat management. Residual trees are planned
24 for and retained in harvest areas (wildlife habitat).

25

26 **9. Protection of Forest Values:**

- 27 • Traplines must be considered.
- 28 • Protect gathering sites, spiritual sites and burial sites.
- 29 • Concerns around harvesting areas with natural medicines.
- 30 • Identify and protect cougar and wolverine (dens) with the appropriate AOC
31 design.
- 32 • Concern that AOC buffers on osprey and eagle nests are excessive, and
33 suggestion that buffers be reduced, considering the state of local
34 populations.
- 35 • Special protection measures on wolf and bear sites was questioned, as
36 the protection of such will lead to increased predation on moose and deer
37 and increased bear and wolf populations. This also means increased
38 potential for human interaction with bad outcomes for both the people and
39 the animals.

40 How Addressed in FMP:

- 1 • Stage 2 LTMD: Consideration for amount of reserve area for the
2 protection of identified forest values is included in strategic modelling.
3 Various known values are mapped during all stages of plan development,
4 unless the value is considered "sensitive" in which case it is not shown on
5 maps.
- 6 • Stage 3 Operational Planning: (also includes Stage 4 Draft Plan) Detailed
7 value identification and operational prescriptions for the protection of
8 known values are considered in operational planning. These values
9 protection measures are documented in the FMP (Table FMP-11). The
10 protection measures must adhere to approved provincial guides (e.g.
11 osprey direction in Stand and Site Guide)
- 12 • Sensitive Indigenous values may be identified and protected (Table FMP-
13 11), but are retained as confidential.
- 14 • Species At Risk and known associated values are identified for the forest
15 and appropriate Area of Concern prescriptions will be in the FMP and
16 applied when affected by operations (Table FMP-11).
- 17 • Mandatory compliance indicators are included in the FMP and measured
18 during plan implementation to ensure that planned activities for the
19 protection of values are being implemented successfully (Table FMP-10).

20

21 **10. Operations - Road Use Management Strategies:**

- 22 • road maintenance strategies (especially active roads)
- 23 • decommissioning of roads and road liability
- 24 • desire for future use of roads
- 25 • want road access to the forest (minimize road closures and road
26 deactivation)
- 27 • need safe winter parking spots (snow plowed areas to support several
28 trucks and trailers) at popular spots on main haul roads (e.g.: access to
29 Jim Lake, access to Botanist Lake etc.)

30 How Addressed in FMP:

- 31 • Stage 2 LTMD: Mandatory road density indicator included in FMP with
32 desirable level (may consider to maintain or increase road density) if
33 continued road use is desired while forest management activities are on-
34 going. Stage 3 Operational Planning: Road Use Management Strategies
35 in FMP text and Table FMP-18.
- 36 • Out of Scope of FMP: Road safety.
- 37

11. Healthy Wildlife Populations and Opportunities for Hunting, Fishing:

- want sustainable populations/enhanced populations of moose, deer and grouse
- want continued opportunities for hunting
- wish for sustainable populations of fish and continued opportunities for fishing.

How Addressed in FMP:

- Stage 2 LTMD: Mandatory objective indicators for landscape class area to cover a broad range of habitat types (BLG coarse filter approach to forest management at the landscape level).
- Stage 3 Operational Planning: (documented in FMP text and tables) Riparian zones are managed as per Stand and Site Guide (Table FMP-11). Road use management strategies address road maintenance and decommissioning (Table FMP-18). Mandatory management indicator for primary and branch road density reflects amount of permanent roads on the forest for forest management and for road-based recreational opportunities.

12. Operations - Harvest Areas:

- efficient, cost effective, quality wood for mills
- Long term sustainable fibre supply for area mills and related employment
- prioritize salvage harvest operations

How Addressed in FMP:

- Stage 2 LTMD: economically and spatially feasible harvest areas (40-year projection) documented in FMP text; Salvage harvest included in harvest eligibility criteria (FMP text). Wood supply is managed and has indicators of objective achievement in FMP (volumes, biomass, broad size classification). FMPs do not manage for employment.
- Stage 3 Operational Planning: harvest areas planned for economical wood supply; Wood utilization (volumes to mills) is projected for 10 year plan period. Any salvage harvest areas to be included in Draft or Final FMPs.

13. Operations - Slash Pile Burning:

- Interest in leaving a small portion of slash piles for wildlife purposes
- Interest from local cottagers to ensure all slash piles are promptly burned.

How Addressed in FMP:

- Stage 3 Operational Planning: Silvicultural strategies in FMP text and planned renewal activities, including slash pile burning (Table FMP-17). Typically all slash piles are planned for burning, in accordance with

1 regional direction to limit losses to non-productive land (roads and
2 landings). Leaving slash piles intact would be against policy. Not all slash
3 piles burn completely, therefore it is expected that some habitat for wildlife
4 will be left.
5

6 **14. Operations - Silvicultural Strategies:**

- 7 • Plan for conifer purity, particularly if chemical tending (herbicides) is not
8 used.
- 9 • Interest to see the company try other non-chemical treatments (e.g.
10 manual tending, prescribed burns, or season of harvest) and monitor
11 regeneration results
- 12 • Need to meet our silvicultural targets.
- 13 • Consider prescribed burning if economical and safe, in order to deal with
14 unwanted brush, hardwood and grasses etc. It would also likely be of
15 some benefit in terms of dealing with insect and disease impacts as well.

16 How Addressed in FMP:

- 17 • Stage 2 LTMD: Regeneration success by treatment type is discuss and
18 analyzed when developing post-harvest renewal treatments for strategic
19 modelling and Silvicultural Ground Rules (Table FMP-4).
- 20 • Stage 3 Operational Planning: Silvicultural strategies in FMP text and
21 planned renewal activities (Table FMP-17). Monitoring of silvicultural
22 success required as per FMPM, including 3 required objective indicators
23 related to silvicultural planning, treatments and success.
- 24 • Insect and disease assessment is out of scope for the FMP. NDMNRF
25 monitors and undertakes mitigative actions as warranted.
26

27 **15. Operations - Silvicultural Strategies - Blueberries:**

- 28 • Interest in prescribed burning to promote blueberry regeneration
- 29 • Interest in maintaining quality forest access to blueberry/mushroom
30 harvesting areas
- 31 • Interest in Highbush Cranberries
- 32 • Interest in the sustainable harvest of blueberries.

33 How Addressed in FMP:

- 34 • Stage 2 LTMD: Regeneration success is discuss and analyzed when
35 developing post-harvest renewal treatments for strategic modelling and
36 Silvicultural Ground Rules (Table FMP-4).
- 37 • Stage 3 Operational Planning: Silvicultural strategies in FMP text and
38 planned renewal activities (Table FMP-17). Operational planning may

1 include specific harvest and regeneration activities if candidate blueberry
2 or cranberry areas are identified.

4 **16. Consultation:**

- 5 • Both the government and industry should continue to reach out to
6 communities, tourism industry, etc. to identify and protect new values.
- 7 • Have Miisun and NDMNRF keep doing what they are doing - they seem to
8 have great relationships with Indigenous communities. This could aid
9 forest management education of other groups.
- 10 • Government needs to modernize how they communicate with
11 stakeholders and solicit input into forest management planning.

12 How Addressed in FMP:

- 13 • Stages 1-5: FMPM manual requirement to consult throughout planning
14 process (and annually through FMP implementation). FMPM
15 requirements include the Public Consultation Process, and First Nation
16 and Métis Community Involvement and Consultation in Forest
17 Management Planning. Improvement of Indigenous participation and
18 public engagement is an on-going communication strategy - opportunity
19 for use of Kenora Forest FMP Indigenous Task Teams.
- 20 • Government modernization is Out of Scope of FMP: The Planning Team
21 does consider effective ways to communicate during development of the
22 FMP and utilizes varied media.

24 **17. Employment:**

- 25 • We need more contractors / more people working on the forest. This is
26 very difficult to do under Miisun's shareholder agreement / business
27 environment.

28 How Addressed in FMP:

- 29 • Employment is Out of Scope of FMP, however, the provision of wood
30 supply and a healthy forest ecosystem will provide the environment for
31 forest-related businesses to continue.

33 **18. Social Benefits from the Forest:**

- 34 • Indigenous communities would like to see more fuelwood available for
35 elders.
- 36 • Indigenous communities are requesting additional economic development
37 from forestry such as employment and business opportunities.

38 How Addressed in FMP:

- 1 • Out of scope of FMP (fuelwood and Indigenous economic development).
2 Fuelwood is now identified in Annual Work Schedule (AWS), not in the 10-
3 year FMP (FMPM 2020).

4

5 **19. Social Issues:**

- 6 • Concerns over Methylmercury accumulation in the English/Wabigoon
7 River.

8 How Addressed in FMP:

- 9 • Out of scope of Kenora Forest FMP (as per Page 165 of the Stand and
10 Site Guide).

3.5 Strategic Management Zones

In the development of the long-term management direction, the Planning Team partitioned the management unit into management zones. A management zone is a geographical area within a management unit that provides spatial context to the long-term management direction, and may influence strategic analysis, and operational planning.

Two types of management zones, strategic and operational, can be used to represent spatial considerations:

Strategic Management Zones (SMZ) represent areas with distinct ecological characteristics, landscape biodiversity requirements or forest-level harvest and retention considerations. Strategic management zones are identified in the SMZ field of the spatial PCI inventory information and Base Model Inventory. Strategic management zones were used to identify the wildlife emphasis areas on the Kenora Forest for caribou, moose, deer and elk. Development of these wildlife emphasis areas is detailed in Supp. Doc. B - Analysis Package, Section 5.2.1.

Operational management zones (OMZ) represent areas distinct operating zones of the Kenora Forest. OMZs may also have operational constraints (e.g., accessibility, wildlife, fisheries or other constraints on forest operations). OMZs also aid in the graphic portrayal of main harvest areas for the next 40 years, a requirement of the FMPM 2020. Fifteen (15) operational zones were identified and are included in the BMI and OPI inventories in the OMZ field. OMZs are labelled Z01 to Z15.

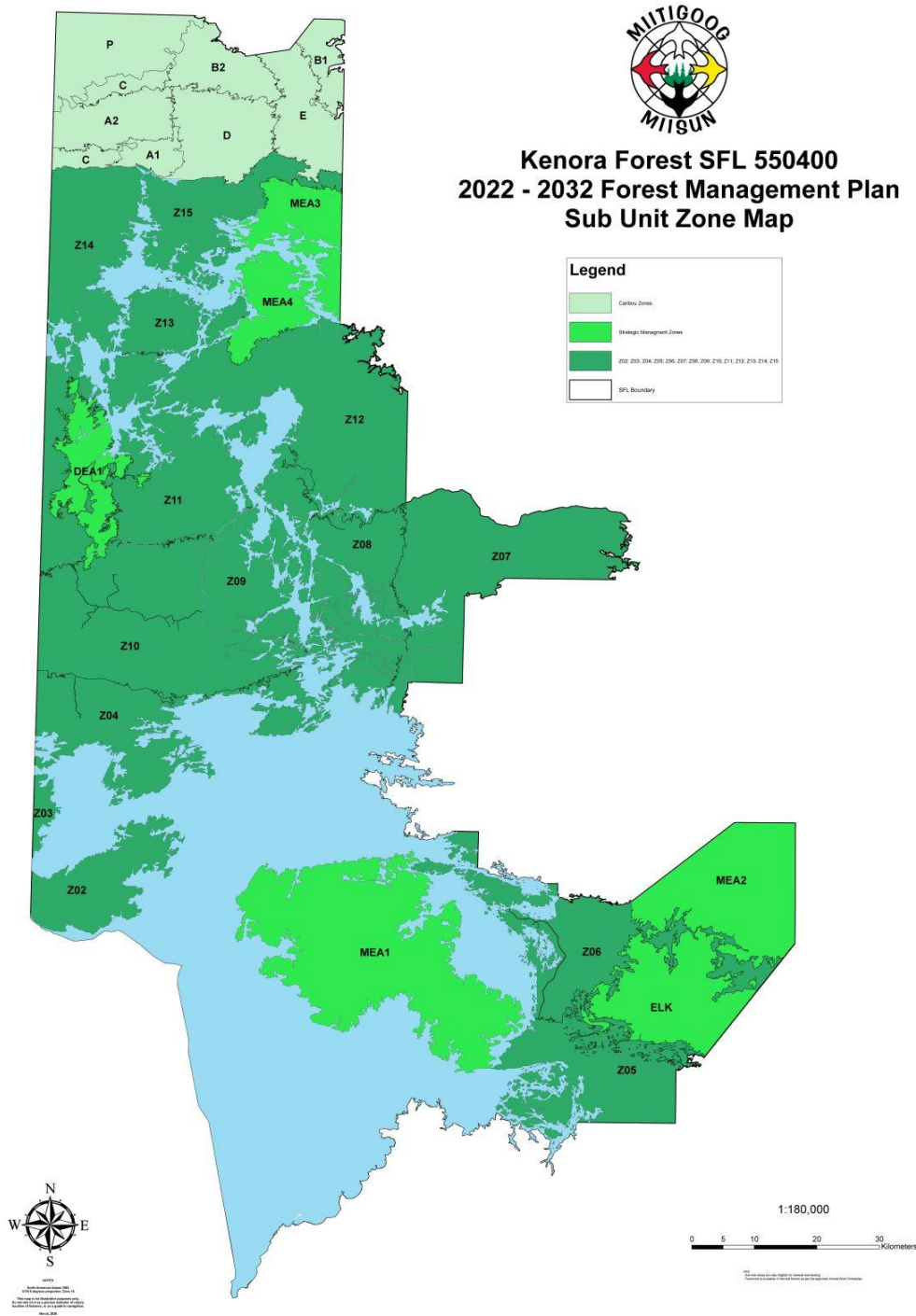
Planning Team also recognized the requirement for current and future Large Landscape Patches (LLPs) in accordance with the Stand and Site Guide. The implementation of the DCHS in the caribou zone, and the abundance of high concentrations of mature and old forest in the non-caribou areas did not necessitate the delineation of additional LLPs on the Kenora Forest.

Subunits - Every stand on the forest was classified uniquely into an SMZ or an OMZ, and both fields were combined into a single user-defined subunit field "SU" in the BMI and OPI. Subunits used in the 2022-2032 FMP are illustrated in Figure 26. Map colour coding indicates the caribou SMZs (DCHS)(light blue/green), the other SMZs for wildlife habitat management emphasis (bright green), and the operational management zones (dark green).

1 Additional modelling inputs and constraints were applied to SMZs and OMZs during
2 LTMD development. Model inputs and constraints used in SFMM are described in
3 Supp. Doc. B – Analysis Package, Sections 6.2.3 – 6.2.5.

4
5
6

Figure 26 Management Zones (Subunits) for the 2022 Kenora Forest FMP



7
8

3.6 Objectives and Indicators

The desired forest conditions and goods and services from the Kenora Forest were discussed by the Planning Team and Local Citizens' Committee, as well as results from discussions with local Indigenous communities and the Métis Nation of Ontario. Results and comments were reviewed and resulted in the management objectives to be strategically planned for and assessed for achievement in this 2022-2032 FMP.

The process of finalizing management objectives and assigning appropriate desirable and target levels for objective indicators are described in the following subsections:

1. Finalize plan management objectives and assign relevant indicators of objective achievement (included in Section 3.6.2 documentation);
2. General approach to determine desirable levels for indicators (Section 3.6.1); and
3. Document desirable and target levels for objective indicators and provide rationale for choice of these levels (Section 3.6.2, Table FMP-10).

A summary of the specific management objectives for this plan is included in Section 3.6.2. For each objective, an indicator or multiple indicators are identified including the actual "measure" for each indicator, timing of assessment, the general rationale for desirable levels for each indicator, and references where modelling investigation results influenced the setting of desirable and target levels for indicators.

Table FMP-10 summarizes plan management objectives, indicators desirable levels and targets, and the timing of assessment.

3.6.1 General Approach to Determining Desirable Levels for Indicators

The *Forest Management Planning Manual (2020)* (FMPM) requires objectives for natural landscape patterns, forest structure and composition, and distribution and abundance of forest ecosystems. For these objectives, the FMPM requires indicators of landscape pattern, area by forest unit and development stage, and amount and distribution of old growth forest to be included in a forest management plan. The FMPM refers to forest management guides for the specific indicators and desirable levels for which a target will be established. The Boreal Landscape Guide requires objective indicators for caribou habitat (amount and pattern), landscape class area, upland conifer area, and young forest (amount and pattern). In addition to the forest management guides, when developing objectives for the amount and distribution of old growth forest,

1 planning teams are to follow direction in the *Old Growth Policy for Ontario's Crown*
2 *Forest* (2003).

3
4 For this Kenora Forest FMP, the desirable levels for certain indicators of objective
5 achievement were determined after analysis of a simulated natural forest scenario,
6 which estimated how the forest might develop in the absence of human intervention.
7 The Science and Information Packages and Ontario's Landscape Tool (OLT) include
8 the most current science-based estimates of the natural forest condition. The Simulated
9 Range of Natural Variation (SRNV) estimates recorded in OLT are forest management
10 unit specific and are both area and landscape pattern based. For each of the indicators
11 required by the FMPM, the planning team used the Regional Specific Science and
12 Information Packages and/or OLT to identify specific indicators for their plan, and used
13 the associated SRNV to identify desirable levels. The current levels on the management
14 unit for each indicator were also considered when developing targets. Planning for a
15 future forest condition that is comparable to BLG natural forest condition projections
16 was the primary consideration for development of the LTMD.

17
18 Indicators of forest composition and structure, proportion of old forest and wildlife
19 habitat are examples of indicators with desirable levels determined in relation to the
20 simulated ranges of natural variation. During development of the LTMD, SFMM
21 strategic modelling results were compared to the SRNV for relevant area indicators and
22 reviewed to see if the estimated SRNVs were reasonable desirable levels for these
23 indicators for the FMP.

24
25 Some of the objective indicators are not based on strategic modelling; e.g., road
26 density, compliance, Local Citizens' Committee engagement, and Indigenous
27 engagement. Desirable levels for other indicators were determined after analysis of the
28 quantity that was currently or historically available from the forest, or the amount that
29 can be sustainably produced while considering the achievement of all objectives (e.g.
30 harvest area, harvest volumes) or the quantity that was expected to be achieved
31 through implementation of the plan (e.g. compliance with area of concern prescriptions,
32 actual harvest area, harvest volume and deliveries to mill, areas successfully
33 established (renewed), road density, Indigenous engagement).

34
35 Spatial analyses for landscape pattern were used to assess the potential of the Kenora
36 Forest to produce spatial caribou habitat, moose habitat, texture of mature and old
37 forest, and landscape pattern of young forest by standard size classes. Modelling
38 investigations for various indicators of forest composition, structure and pattern were
39 conducted early in the development of the LTMD and were considered in the

1 determination of desirable and target levels for the desired forest and benefits from the
2 Kenora Forest (documented in Section 3.6.2).

4 3.6.2 Plan Management Objectives, Indicators and Desirable Levels

6 **FINAL PLAN NOTE:** LTMD desirable levels described in this section are unchanged
7 from LTMD/Draft Plan to the final FMP. However, estimated Plan Start 2022 levels for
8 indicators are revised based on impacts of 2021 wildfires and revised forecast
9 depletions prior to Plan Start 2022. See Section 4.9 for a summary of revised Plan Start
10 2022 levels for objective indicators.

12 The list of desired forest and benefits, past management plans for the Kenora Forest,
13 and NDMNRF sources of direction (including Figure A-3 from the *Forest Management*
14 *Planning Manual, 2020*) and forest management guides were used to develop plan
15 objectives, indicators of objective achievement, desirable levels, and targets for the
16 2022-2032 Kenora Forest FMP.

18 As per direction in the 2020 FMPM, objective categories, criteria and indicators from the
19 Crown Forest Sustainability Act (CFSA) objective categories were developed. A total of
20 11 Management Objectives, including 30 indicators of objective achievement, were
21 developed by the Planning Team for the long-term management direction for this plan.

23 A management objective was developed for each desired forest and benefit indicator (or
24 group of related indicators) identified for the plan. A desirable level and the timeframe
25 for achievement were also developed for each indicator of objective achievement. Only
26 indicators that could be quantified were selected for the management plan.

28 In accordance with management objectives, it is desirable that the FMP project forest
29 management activities (Long-Term Management Direction) that will create a future
30 forest landscape with a composition, structure and pattern that is similar to those
31 created by natural processes. These management objectives for natural forest diversity
32 also serve to provide a sustainable range of wildlife habitat types through time,
33 necessary for a majority of wildlife species on the Kenora Forest.

35 The Strategic Forest Management Model (SFMM) was used to develop a Long-term
36 Management Direction that balances the achievement of certain management
37 objectives over time (those that can be modelled through time). The objectives
38 considered in the Long-term Management Direction include forest composition and age

1 class structure, old growth forest areas, available forest area, caribou habitat, harvest
2 areas, and harvest volumes.

3

4 A process of repetitive analyses was conducted to balance the achievement of
5 management objectives while developing a Long-term Management Direction for the
6 Kenora Forest. Results or findings of the strategic scoping analyses were used to
7 guide the balancing of management objective achievement. During LTMD
8 development, the Planning Team was forced to make trade-offs for conflicting
9 management objectives (e.g. young forest versus mature or old, and conifer versus
10 hardwood) or where the land base of the Kenora Forest did not allow achievement of
11 desirable levels in the short or medium-term between multiple indicators. Trade-offs in
12 achievement levels were required when the achievement of certain desired forest
13 conditions conflicted with the provision of desired goods and services, or vice versa. If
14 desirable levels could not be reached in this 10-year plan period, short-term
15 compromises were reached, and target levels for this plan period were established to
16 allow movement towards the desirable levels for the indicator in the future.

17

18 A summary of the plan objectives, indicators of objective achievement, desirable levels,
19 targets and timing of assessment follows in this text section and is included in Table
20 FMP-10. The following text also describes the rationale for desirable and target levels
21 for each indicator and references where scoping investigation results influenced the
22 setting of desirable and target levels for indicators.

23

24 **3.6.2.1 Objective 1: Caribou Habitat**

25

26 **Objective 1: Caribou Habitat:**

27 "To maintain forest function for caribou habitat in the Kenora Forest in the Caribou
28 Habitat Management Zone."

29

30 This objective includes indicators carried forward from the 2012 FMP. These indicators
31 are required by the *Forest Management Guide for Boreal Landscapes (2014)* and are
32 consistent with *Ontario's Woodland Caribou Conservation Plan (CCP)*. Caribou (Boreal
33 ecotype) is a Species At Risk and their habitat is regulated by the *Endangered Species
34 Act* (federal) and *Species At Risk Act* (provincial).

35

36 Ontario Regulation 242/08 specifies the conditions under which a person who conducts
37 forest operations are exempt from sections of the Endangered Species Act (ESA) that
38 prohibit a person from killing, harming or harassing a caribou or damaging or destroying
39 its habitat. These conditions specify that the forest management plan must provide for
40 the following:

- 1
- 2 i. the continuous availability of habitat for caribou (boreal population), both
- 3 spatially and temporally,
- 4 ii. the establishment and growth of areas of conifer forests that are suitable
- 5 to provide caribou (boreal population) habitat in the future, and
- 6 iii. road-use management strategies that assist in maintaining or improving
- 7 habitat conditions for caribou (boreal population).
- 8 (Above ESA condition items relate to:
- 9 i) indicators 1a, 1b and 1c,
- 10 ii) implementation of a caribou DCHS and provision of online caribou
- 11 habitat indicators 1d and 1e, and
- 12 iii) Table FMP-18 Road Construction and Use Management,
- 13 Text Section 4.5.9 Conditions on Roads, Landings and Aggregate
- 14 Pits (CORLAPs) and
- 15 Supplementary Documentation H – Road Planning.)
- 16

Indicator 1a: Caribou Habitat Area

18

19 This indicator objective is carried forward from the 2012 FMP, and relates to Desired

20 Forest and Benefits for wildlife habitat management. This indicator is required by the

21 Boreal Landscape Guide, and addresses the requirement for habitat for forest-related

22 Species at Risk (FMPM).

23

24 Timing of Assessment: Preliminary assessment at LTMD, assessment at completion of

25 operational planning and Annual Reports for Year 5 and final

26 year of plan implementation.

27 How Measured: Crown productive area of caribou refuge habitat and caribou winter

28 combined habitat for the caribou zone, projected through time in SFMM model.

29 Desirable Level: The desirable level is to maintain caribou refuge habitat and winter

30 combined habitat within the interquartile hectare range Simulated Range of Natural

31 Variation (SRNV) as recorded in Ontario's Landscape Tool for the Kenora Forest (Table

32 12).

33 Rationale for Desirable and Target Levels: Ontario's Landscape Tool (OLT) provides

34 an analytical projection of the natural range of forest types/age class structure for the

35 Kenora Forest. The interquartile range (IQR) of the SRNV for caribou habitat (refuge,

36 winter combined) was adopted as the desirable level and was considered to be the best

37 available science on the natural forest structure. At Plan Start 2022, caribou refuge

38 habitat was above its IQRs and winter combined habitat was within the IQR (met or

39 exceeded desirable levels). Therefore, the target levels for both habitat types were to

40 maintain habitat within desirable levels during the plan period.

1 **Table 12 Amount of Caribou Habitat Desirable and Target Levels**
2

(1a) Caribou Habitat	Plan Start 2022 (ha)	Desirable Level (ha)	Target (2032)
Refuge	71,574	54,045 – 61,458	Maintain (Move towards)
Winter Combined	29,131	18,667 – 45,161	Maintain (Move towards)

3 **FINAL PLAN NOTE:** See Section 4.9.6 for the comparison of LTMD Plan Start 2022 to
4 the revised estimate for Plan Start 2022 considering 2021 wildfires and revised forecast
5 depletions.
6

7 **Indicator 1b: Texture of Caribou Winter Habitat**
8

9 This indicator is carried forward from the 2012 FMP. It measures the patchiness (how
10 spatially concentrated) caribou winter combined habitat is on the forest. In general,
11 landscape pattern is an indicator on the degree of fragmentation. Fragmentation and
12 connectivity play a large role on the functionality of a landscape and provide different
13 habitat needs based on the wildlife species present. Winter combined habitat includes
14 both winter used and winter preferred habitats.
15

16 Timing of Assessment: Preliminary assessment at LTMD, assessment at completion of
17 operational planning and Annual Reports for Year 5 and final
18 year of plan implementation.

19 How Measured: Spatial measurement of the caribou zone in OLT model at 6,000 ha
20 and 30,000 ha scales.

21 Desirable Level: The desirable level is to have the landscape pattern move towards
22 percentage projections as recorded in OLT for caribou winter combined habitat (mean
23 by concentration class), focusing on 60% and greater concentration classes (Table 13).

24 Rationale for Desirable and Target Levels: The BLG provides the indicator desirable
25 level, including the focus on concentration classes >60%. The BLG was considered to
26 be the best available science on the natural forest structure. Ontario's Landscape Tool
27 (OLT) provides a record of the analytical projection of the natural landscape pattern for
28 the Kenora Forest. The winter habitat texture is below the desirable level for >60%
29 proportion classes at Plan Start (poor achievement), therefore the target level is to
30 move towards the desirable level through this 10-year plan period.

31 **FINAL PLAN NOTE:** See Section 4.9.6 for the comparison of LTMD Plan Start 2022 to
32 the revised estimate for Plan Start 2022 considering 2021 wildfires and revised forecast
33 depletions.
34

1 **Table 13 Desirable and Target Levels for Texture of Caribou Winter Combined**
 2 **Habitat**

Analysis Scale and Concentration Class	Plan Start 2022	Mean Desirable Level	Target (2032)
(1b) Texture of Caribou Winter Habitat (Combined) (hexagon frequency distribution by mean proportion): 6,000 ha Hexagon Scale:		Move towards mean, focusing on 60% and greater concentration classes	Move towards or exceed the mean for > 60% proportion classes
1 - 20% concentration	38%	17%	
21 - 40% concentration	20%	17%	
41 - 60% concentration	24%	22%	
61 - 80% concentration	17%	30%	
81 - 100% concentration	1%	15%	
30,000 ha Hexagon Scale:			
1 - 20% concentration	5%	8%	
21 - 40% concentration	66%	22%	
41 - 60% concentration	30%	32%	
61 - 80% concentration	0%	34%	
81 - 100% concentration	0%	6%	

3
4
5 **Indicator 1c: Texture of Caribou Refuge Habitat**

6
7 This objective indicator is carried forward from the 2012 FMP. It measures the
8 patchiness (how spatially concentrated) caribou refuge habitat is on the forest.

9
10 Timing of Assessment: Preliminary assessment at LTMD, assessment at completion of
11 operational planning and Annual Reports for Year 5 and final
12 year of plan implementation.

13 How Measured: Spatial measurement of the caribou zone in OLT model at 6,000 ha
14 and 30,000 ha scales.

15 Desirable Level: The desirable level is to have the landscape pattern move towards
16 percentage projections as recorded in OLT for caribou refuge habitat (mean by
17 concentration class), focusing on 60% and greater concentration classes (Table 14).

18 Rationale for Desirable and Target Levels: Ontario's Landscape Tool (OLT) provides a
19 record of the analytical projection of the natural landscape pattern for the Kenora
20 Forest. The mean frequency of caribou refuge habitat by concentration classes (with
21 focus on the 61-80% and 81-100% concentration classes) was adopted as the desirable
22 level and was considered to be the best available science on the natural forest
23 structure. The habitat texture exceeds the desirable level for >60% proportion classes

1 at Plan Start (excellent achievement), therefore the target level is to move towards or
2 exceed the desirable level through this 10-year plan period.

3 **FINAL PLAN NOTE:** See Section 4.9.6 for the comparison of LTMD Plan Start 2022 to
4 the revised estimate for Plan Start 2022 considering 2021 wildfires and revised forecast
5 depletions.

6
7 **Table 14 Desirable and Target Levels for Texture of Caribou Refuge Habitat**
8

Analysis Scale and Concentration Class	Plan Start 2022	Mean Desirable Level	Target (2032)
(1c) Texture of Caribou Refuge (hexagon frequency distribution by mean proportion):		Move towards mean, focusing on 60% and greater concentration classes	Move towards or exceed the mean for > 60% proportion classes
6,000 ha Hexagon Scale:			
1 - 20% concentration	0%	0%	
21 - 40% concentration	0%	2%	
41 - 60% concentration	0%	12%	
61 - 80% concentration	17%	34%	
81 - 100% concentration	83%	53%	
30,000 ha Hexagon Scale:			
1 - 20% concentration	0%	0%	
21 - 40% concentration	0%	0%	
41 - 60% concentration	0%	8%	
61 - 80% concentration	0%	43%	
81 - 100% concentration	100%	49%	

9
10
11 **Indicator 1d: Conifer Purity in Jack Pine and Black Spruce LGFUs**

12
13 This indicator contributes to the silvicultural objective requirement of *Ontario's*
14 *Woodland Caribou Conservation Plan*.

15
16 Timing of Assessment: Annual Report for final year of plan implementation.

17 How Measured: This indicator is calculated from an updated Base Model Inventory.
18 Total percentage species composition of Jack Pine (Pj), Black Spruce (Sb) and White
19 Spruce (Sw) combined in the targeted landscape guide conifer forest units (in only
20 PJDOM, PJMX1, SBLOW, SBDOM and SBMX1 landscape guide forest units).
21 Percentage is reported by forest unit (PJD, PJM, SBD, SBL and SBM) which match the
22 LGFUs.

Desirable Level: The desirable level is to maintain or increase the combined percentage of Jack Pine, Black Spruce and White Spruce in targeted conifer dominated forest units (Table 15).

Rationale for Desirable and Target Levels: The specific targeted forest units are the purer conifer forest units which have the capability of producing better caribou habitat than mixedwoods do. Conifer forest composition in these forest units is critical to caribou habitat (Species at Risk) therefore a reduction in hardwood and mixedwood forests in the caribou zone is desirable and will result in an increase in preferred caribou habitat. The desirable and target levels are to maintain or increase the percentage of Jack Pine, Black Spruce and White Spruce in these specific conifer dominated forest unit areas at or above the Plan Start levels.

Table 15 Desirable and Target Levels for Conifer Purity

(1d) Conifer Purity in Jack Pine and Black Spruce LGFUs:	Plan Start 2022 (% Pj+Sb+Sw)	Desirable Level	Target (2032)
PJD	95%	Maintain or increase percentage of jack pine and spruce in PJD, PJM, SBD, SBL, and SBM.	Same as Desirable Level
PJM	91%		
SBD	95%		
SBL	90%		
SBM	89%		

Indicator 1e: Amount and Arrangement of Online Caribou DCHS

This objective indicator is carried forward from the 2012 FMP. Direction in the Boreal Landscape Guide and Caribou Conservation Plan, require the Kenora Forest to demonstrate that it is providing sufficient online habitat for caribou persistence.

Timing of Assessment: Assessment at LTMD.

How Measured: This indicator is not analyzed in SFMM modelling. Analysis was completed using a regional ecosite-based caribou habitat model. Proportion of area in DCHS blocks with an average age greater than 60 years is divided by total DCHS area.

Desirable Level: The desirable level is to maintain $\geq 40\%$ of DCHS area with an average DCHS block age of >60 years old (Table 16).

Rationale for Desirable and Target Levels: To meet the requirements of the Boreal Landscape Guide and Caribou Conservation Plan, forest management units within the Caribou Continuous Distribution are required to integrate a Dynamic Caribou Habitat Schedule into the planning process. The CCP also provides direction for a Caribou Insurance Policy that states that 70-80% of the DCHS will be in deferral period. This

1 desirable level is calculated to be $\geq 40\%$ for a DCHS based on five 20-year periods
2 over 100 years. The target level is the same as the desirable level.

3
4 The Plan Start 2022 amount of online DCHS is 28%, below the desirable level. The
5 area of the Kenora Forest within the Caribou Continuous Range has had multiple large
6 fires since the 1980s which have resulted in much of the treed habitat being <40 years
7 old (at plan start in 2022). Several notable fires since the 1980s have included KEN73
8 (in 1983 – 82, 323 ha), which turns 41 years old at year 2024. This burnt area will
9 provide good caribou habitat as the block is in excellent pure conifer condition, shallow
10 soil and wide open rock knobs for lichen availability, and lacks almost any other
11 disturbance. This area was considered during development of DCHS block delineation
12 and operations timing. Due to aging of these burns, the online DCHS is 76% by 2032
13 (the end of this FMP period). The target level is the same as the desirable level as it is
14 achievable within the period of the FMP.

15
16 **Table 16 Desirable and Target Levels for Online Caribou DCHS %**

(1e) On-line Caribou DCHS	Plan Start 2022	Desirable Level	Target (2032)
Amount and arrangement of online caribou DCHS (% of DCHS area with block average >60 years old):	28%	$\geq 40\%$	Maintain desirable level (Move towards)

18 **FINAL PLAN NOTE:** See Section 4.9.6 for the comparison of LTMD Plan Start 2022 to
19 the revised estimate for Plan Start 2022 considering 2021 wildfires and revised forecast
20 depletions.

21 22 **3.6.2.2 Objective 2: Forest Composition**

23 24 **Objective 2: Forest Composition:**

25 “To emulate natural forest composition and age classes which includes old growth
26 forest.”

27
28 This objective combines several objectives and indicators carried forward from the
29 2012-2022 FMP and includes indicators to address two indicators from the *Forest*
30 *Management Planning Manual (2020)* required for this FMP (area by forest unit and age
31 grouping, amount and distribution of old forest). This objective is also required by the
32 *Forest Management Guide for Boreal Landscapes (2014)*. This objective also
33 addresses several desired forest and benefits related to forest composition and
34 structure, and wildlife habitat and forest sustainability identified the Local Citizens’
35 Committee’s and Indigenous communities’ Desired Forest and Benefits.

Indicator 2a: Landscape Class Area

Landscape classes are groupings of Landscape Guide Forest Units by development stage, which are meaningful to how forests function as habitat. Forest landscape classes are used to describe the current forest composition, structure and pattern at the landscape level. There are seven Landscape Classes used to describe forest composition and age structure (Section 2.1.3.2). The four “Mature and Late” successional landscape classes are considered for this indicator in accordance with the milestones table prepared and considered according to the Boreal Landscape Guide during preparation of Table FMP-10 Management Objectives.

Timing of Assessment: Preliminary assessment at Proposed LTMD, assessment at completion of operational planning, and assessment at Annual Reports for Year 5 and final year of plan implementation.

How Measured: SFMM projected Crown productive area by mature/late successional stage provincial Landscape Class projected through time.

Desirable Level: The desirable level is to maintain the mature and late successional landscape class areas within the interquartile hectare range Simulated Range of Natural Variation (SRNV) for each mature and late successional landscape class as recorded in Ontario’s Landscape Tool for the Kenora Forest (Table 17).

Rationale for Desirable and Target Levels: Ontario’s Landscape Tool (OLT) provides a record of the analytical projection of the natural range of forest types/age class structure for the Kenora Forest. The interquartile range of the SRNV for mature/late successional landscape classes was adopted as the desirable level and was considered to be the best available science on the natural forest structure. The Plan Start levels for all mature and older components of the indicator are above the desirable ranges, therefore the target levels are to decrease and maintain within the desirable level through this 10-year plan period.

Table 17 Desirable and Target Levels by Landscape Class

(2a) Landscape Class	Plan Start 2022 (ha)	Desirable Level (ha)	Target (2032)
Mature and late balsam fir	18,014	12,782 to 17,982	decrease and maintain
Mature and late lowland conifer	38,317	23,354 to 28,328	decrease and maintain
Mature and late upland conifer	207,290	152,976 to 224,820	maintain
Mature and late hardwood	145,804	43,706 to 65,315	decrease

Indicator 2b: Old Growth Forest Area

1 This indicator objective is carried forward from the 2012-2022 FMP, and relates to
 2 Desired Forest and Benefits. This objective and related indicator also meet
 3 requirements of the FMPM, the Boreal Landscape Guide and the Old Growth Policy
 4 (2003).

5
 6 Timing of Assessment: Preliminary assessment at LTMD, final assessment at
 7 completion of operational planning, and Annual Reports for
 8 Year 5 and final year of plan implementation.

9 How Measured: SFMM projected Crown productive area by old growth grouping
 10 projected through time. NDMNRF NWR Regional old growth groupings and
 11 onset/duration age criteria were used for this FMP.

12 Desirable Level: The desirable level is to maintain the amount of old growth by
 13 standard old growth grouping within the interquartile hectare range (Simulated Range of
 14 Natural Variation)(SRNV) as recorded in Ontario's Landscape Tool for the Kenora
 15 Forest for all groupings except Big Pines (red pine, white pine) (Table 18). The Big
 16 Pines do not have calculated desirable level recorded in OLT, however the Planning
 17 Team followed direction in the BLG to increase or maintain area, and also the old
 18 growth policy requiring levels of old growth red pine and white pine to not fall below the
 19 1995 level of 97 ha old growth. The Planning Team agreed that a desirable level would
 20 be to "increase" the amount of area of old growth red pine and white pine.

21 Rationale for Desirable and Target Levels: Ontario's Landscape Tool (OLT) provides a
 22 record of the analytical projection of the natural range of forest types/age class structure
 23 for the Kenora Forest. The Interquartile range (IQR) of the SRNV for old growth forest
 24 groupings was adopted as the desirable level and was considered to be the best
 25 available science on the natural forest structure. The Planning Team set the desirable
 26 level for Red Pine-White Pine as no calculation was available in OLT. The target level
 27 for Plan End (2032) is to increase area groups towards the desirable level as all
 28 indicator components are below desirable levels at Plan Start 2022.

29

30 **Table 18 Desirable and Target Levels by Old Growth Grouping**

31

(2b) Old Growth Area	Plan Start 2022 (ha)	Desirable Level (ha)	Target (2032)
Lowland Conifer	4,194	12,236 to 17,281	increase
Upland Conifer	24,764	47,362 to 79,383	increase and maintain
Mixedwood and Hardwood	24,780	55,649 to 78,344	increase and maintain
White Pine and Red Pine "Big Pines"	1,969	increase	increase

32

33 **Indicator 2c: All Ages Red Pine and White Pine Forest Unit Area**

1
2 This indicator is included in the FMP to address “*A Conservation Strategy for Old*
3 *Growth Red and White Pine Forest Ecosystems for Ontario*” (MNRF, 1995). While this
4 policy was replaced by “*Old Growth Policy for Ontario’s Crown Forests*” (MNRF, 2003),
5 the requirement in the policy to maintain or increase 1995 levels of red pine and white
6 pine (all ages) is still being implemented, as well as consideration for the “pre-industrial
7 condition” referenced in the Boreal Landscape Guide.

8
9 Timing of Assessment: Preliminary assessment at LTMD, final assessment for Annual
10 Reports for Year 5 and final year of plan implementation.

11 How Measured: GIS query for PRW forest unit area after plan implementation
12 (includes the NWR PwDom, PrDom, PrwMx standard forest unit (SFU) areas).

13 Desirable Level: Increase towards 39,135 ha.

14 Rationale for Desirable and Target Levels: The desirable level was derived from Boreal
15 Landscape Guide science package information indicating that 6% of productive forest in
16 ecoregion 4S (95% of Kenora Forest) and 0% of ecoregion 3S (5% of Kenora Forest)
17 would have been in the red pine – white pine forest type. This resulted in a desirable
18 level of increasing PRW area towards 39,135 ha on the Kenora Forest. The Boreal
19 Landscape Guide requires that red pine and white pine area does not fall below 1995
20 levels. Since regional standard forest units did not exist in 1995, working group area
21 was used to inform the comparison of the desirable level to 1995 levels. The area of all
22 ages red pine was estimated to be 10,220 ha in 1995. The Plan Start 2022 level is
23 above the 1995 level, and it is expected that current red pine or white pine stands
24 should continue to persist and increase (target level) in area through regeneration
25 efforts to move towards the pre-industrial condition.

27 **Indicator 2d: Upland Pine and Spruce Area**

28
29 This objective indicator for upland, pure conifer (jack pine and spruce) is required by the
30 *Forest Management Planning Manual (2020)* and the *Forest Management Guide for*
31 *Boreal Landscapes (2014)*. It is carried forward from the 2012 FMP.

32
33 Timing of Assessment: Preliminary assessment at Proposed LTMD, assessment at
34 completion of operational planning, and assessment at Annual
35 Reports for Year 5 and final year of plan implementation.

36 How Measured: Total area of the Crown productive forest land base in the PJD, PJM,
37 SBD and SBM forest unit areas.

38 Desirable Level: The desirable level is to increase the amount of upland pure conifer to
39 the interquartile hectare range Simulated Range of Natural Variation (SRNV) as
40 recorded in Ontario’s Landscape Tool for the Kenora Forest (Table 19).

Rationale for Desirable and Target Levels: Ontario's Landscape Tool (OLT) provides a record of the analytical projection of the natural range of forest types/age class structure for the Kenora Forest. The interquartile range of the SRNV for upland conifer was adopted as the desirable level and was considered to be the best available science on the natural forest structure. Since the desirable level is not achieved at Plan Start, the target level is to increase towards the desirable level through this 10-year plan period. See Section 3.7.3.1 (Objective Achievement) and Section 4.4.1 Renewal and Tending Areas for the silvicultural strategy to regeneration upland pine and spruce forest.

Table 19 Desirable and Target Levels for Upland Conifer

Indicator	Plan Start 2022 (ha)	Desirable Level (ha)	Target (2032)
(2d) Upland Conifer (PJD+PJM+SBD+SBM)	233,327	290,514 to 343,729	Increase

Indicator 2e: Young Forest Area

This indicator is a new indicator for amount of young forest (<36 years old) required by the FMPM (2020) and the *Forest Management Guide for Boreal Landscapes* (2014). The 2012 FMP included an indicator for forest unit area by broad age grouping, including young/immature, which is now replaced by this indicator.

Timing of Assessment: Preliminary assessment at Proposed LTMD, assessment at completion of operational planning, and assessment at Annual Reports for Year 5 and final year of plan implementation.

How Measured: Total area of the Crown productive forest land base less than 36 years of age (all forest units combined).

Desirable Level: The desirable level is to maintain the amount of young forest (all forest units) in the interquartile range of the Simulated Range of Natural Variation (SRNV) as recorded in Ontario's Landscape Tool for the Kenora Forest (Table 20).

Rationale for Desirable and Target Levels: Ontario's Landscape Tool (OLT) provides a record of the analytical projection of the natural range of forest types/age class structure for the Kenora Forest. The interquartile range of the SRNV for young forest area was adopted as the desirable level and was considered to be the best available science on the natural forest structure. Plan Start area is below the desirable level, therefore the target level is to increase young forest area through this 10-year plan period (achieve at least the minimum IQR hectares through time).

Table 20 Desirable and Target Levels for Young Forest

Indicator	Plan Start 2022 (ha)	Desirable Level (ha)	Target (2032)
(2e) Young Forest (<36 years)	83,576	129,712 to 227,291	increase

FINAL PLAN NOTE: See Section 4.9.6 for the comparison of LTMD Plan Start 2022 to the revised estimate for Plan Start 2022 considering 2021 wildfires and revised forecast depletions.

3.6.2.3 Objective 3: Landscape Pattern

Objective 3: Landscape Pattern:

“To emulate natural disturbance and landscape patterns characteristic of the Kenora Forest.”

This objective includes two indicators for landscape pattern texture of mature and old forest and for young forest required by the *Forest Management Planning Manual (2020)* and the *Forest Management Guide for Boreal Landscapes (2014)*.

Indicator 3a: Texture of Mature and Old Forest by Concentration Class

This objective is carried forward from the 2012-2022 FMP (was then following the *Forest Management Guide for Natural Disturbance Pattern Emulation (2001)*) and also addresses a required landscape pattern indicator from the FMPM (2020) and the Boreal Landscape Guide (2014).

Timing of Assessment: Preliminary assessment at Proposed LTMD, assessment at completion of operational planning, and assessment at Annual Reports for Year 5 and final year of plan implementation.

How Measured: Spatial measurement in OLT model at 500 ha and 5,000 ha scales.

Desirable Level: The desirable level is to have the landscape pattern consistent with mean percentage concentration projections for mature/old forest by concentration class as established for the forest and recorded in OLT, with a focus on the concentration classes >60% (Table 21).

Rationale for Desirable and Target Levels: This landscape pattern indicator is assessed to determine whether the projected planned harvest for this 10-year plan period will create a landscape pattern consistent with the simulated natural forest condition. The mean desirable level for concentration of mature and old forest areas was calculated by Ontario’s Landscape Tool and accepted by the Planning Team as the best estimation of the natural forest condition. The desirable level is to move towards the mean, with a

1 focus on the two concentration classes > 60%. The target level is the same as the
 2 desirable level. Strategies to improve achievement of this indicator include consolidating
 3 harvest area patches to create concentrated larger, patches of young forest capable of
 4 aging into future patches of mature and old forest in the future.

5
 6 **Table 21 Desirable and Target Levels for Mature and Old Forest Texture**

Analysis Scale and Concentration Class	Plan Start 2022	Mean Desirable Level	Target (2032)
(3a) Mature and Old Forest: 500 ha Hexagon Scale:		Move towards mean with a focus on the two concentration classes > 60%	Move towards or exceed the mean for > 60% proportion classes
.01 - .20	12%	40%	
.21 - .40	10%	13%	
.41 - .60	18%	10%	
.61 - .80	20%	10%	
> .80	38%	28%	
5,000 ha Hexagon Scale:			
.01 - .20	10%	28%	
.21 - .40	9%	23%	
.41 - .60	21%	20%	
.61 - .80	30%	17%	
> .80	29%	12%	

8 **FINAL PLAN NOTE:** See Section 4.9.6 for the comparison of LTMD Plan Start 2022 to
 9 the revised estimate for Plan Start 2022 considering 2021 wildfires and revised forecast
 10 depletions.

12 **Indicator 3b: Young Forest Patch Size (Frequency Distribution by Size Class)**

13
 14 This indicator is similar to an indicator in the 2012-2022 FMP (the 2012-2022 FMP
 15 included an indicator for frequency of disturbance patches by size class as per the
 16 previous NDPE forest management guide). This indicator also meets the requirement
 17 of the FMPM, and the *Forest Management Guide for Boreal Landscapes*.

18
 19 Timing of Assessment: Preliminary assessment at Proposed LTMD, assessment at
 20 completion of operational planning, and assessment at Annual
 21 Reports for Year 5 and final year of plan implementation.

22 How Measured: Spatial measurement in Ontario's Landscape Tool.

Desirable Level: The desirable level is to have the young forest landscape pattern consistent with projections of mean frequency by size class calculated for the forest and recorded in OLT (Table 22).

Rationale for Desirable and Target Levels: This landscape pattern indicator is assessed to determine whether the projected planned harvest for this 10-year plan period will create a landscape pattern consistent with historic natural disturbances. The mean desirable level for proportions of frequency of young forest patch size were recorded in Ontario's Landscape Tool and accepted by the Planning Team as the best estimation of the natural forest condition. The target level is to move towards the desirable level through implementation of planned harvest in this 10-year plan period. As with Indicator 3a, strategies to improve achievement of this indicator include consolidating harvest area patches to create concentrated larger, patches of young forest. This will increase frequency of larger young forest patches in relation to the smaller patches.

Table 22 Desirable and Target Levels for Young Forest Patch Size Frequency

(3b) Young Forest Patch Size Classes (ha)	Plan Start 2022	Mean Desirable Level	Target (2032)
< 100	67%	61%	Move towards mean
101-250	22%	16%	
251-500	6%	8%	
501-1,000	4%	6%	
1,001-2,500	0%	5%	
2,501-5,000	1%	2%	
5001-10,000	0%	1%	
10,001-20,000	0%	1%	
>20,000	0%	0%	

FINAL PLAN NOTE: See Section 4.9.6 for the comparison of LTMD Plan Start 2022 to the revised estimate for Plan Start 2022 considering 2021 wildfires and revised forecast depletions.

While the Kenora Forest has a generally good young forest patch size frequency at Plan Start 2022, the tracking young forest pattern through consecutive FMPs will be important. Simply stated, young forest pattern is generally the inverse of the texture of mature and older forest. While the Kenora Forest has an abundance of mature/older texture at Plan Start 2022, future increases in smaller young forest patch size frequency over several decades can result in forest fragmentation and not enough large patches. If this happens for several decades without coalescing small patches into bigger patches of young forest, the forest will be difficult to spatially recover to the desirable

1 level. Once the age difference gets more than 20-40 years between adjacent stands or
2 small patches, operationally it is difficult to amalgamate larger, eligible harvest areas – a
3 trend that would be very hard to change. Eventually the texture of the mature and old
4 will flip to the less dense classes and move away the desirable texture. Future forest
5 managers will need to monitor texture, and ensure that there is a range of young forest
6 patches sizes developed on the Kenora Forest.

7 **3.6.2.4 Objective 4: Moose Habitat**

8
9 This objective and related indicators meets the requirement of the FMPM, and the
10 *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales*
11 (MNR 2010). As related to the previous two objectives, the objective relates to
12 identified LCC and Indigenous communities' Desired Forest and Benefits for ungulate
13 habitat, as well as opportunities for roads and recreation (including hunting).
14

15 **Indicator 4a: Habitat Proportion by Moose Emphasis Area**

16
17 Timing of Assessment: Proposed LTMD and completion of operational planning (Table
18 FMP-10).

19 How Measured: Spatial measurement in Ontario's Landscape Tool for each of four
20 MEAs (Supp. Doc. B – Analysis Package, Section 5.2.1 and Appendix 2).

21 Desirable Level: The desirable level is to have the moose habitat proportion by habitat
22 type by MEA consistent with projections for the habitat as recorded in OLT (consistent
23 with Stand and Site Guide)(Table 23).

24 Rationale for Desirable and Target Levels: The mean proportions by moose habitat
25 type were recorded in Ontario's Landscape Tool and accepted by the Planning Team as
26 the best estimation of the natural forest condition. Plan Start (2022) level of habitat by
27 MEA generally approximates the desirable levels however the amount of Browse is low
28 in all MEAs and should be increased. Therefore, the target level is to move towards or
29 maintain within the proportion range by habitat type, by MEA. Overall achievement will
30 be assessed for this FMP indicator, recognizing that achievement may be varied
31 between the three habitat types, within each MEA.
32

1 **Table 23 Desirable and Target Levels for Moose Habitat by MEA**
2

Moose Emphasis Area	Indicator Habitat Type	Plan Start 2022	Desirable Level	Target (2032)
MEA #1: Aulneau Peninsula	Browse Producing Forest	3%	5-30%	Move towards or maintain within proportion range by habitat type, by MEA
	Hardwood/Mixedwood Forest	43%	20-55%	
	Mature Conifer Forest	37%	15-35%	
MEA #2: Maybrun	Browse Producing Forest	13%	5-30%	
	Hardwood/Mixedwood Forest	34%	20-55%	
	Mature Conifer Forest	44%	15-35%	
MEA #3: North English River	Browse Producing Forest	3%	5-30%	
	Hardwood/Mixedwood Forest	42%	20-55%	
	Mature Conifer Forest	8%	15-35%	
MEA #4: South English River	Browse Producing Forest	13%	5-30%	
	Hardwood/Mixedwood Forest	36%	20-55%	
	Mature Conifer Forest	30%	15-35%	

3 **FINAL PLAN NOTE:** See Section 4.9.6 for the comparison of LTMD Plan Start 2022 to
4 the revised estimate for Plan Start 2022 considering 2021 wildfires and revised forecast
5 depletions.
6

7 **Indicator 4b: Frequency of Young Forest Patch Size by MEA**
8

9 Timing of Assessment: Proposed LTMD and completion of operational planning (Table
10 FMP-10).

11 How Measured: Spatial measurement in Ontario's Landscape Tool for each MEA.

12 Desirable Level: The desirable level is to have the frequency distribution of young
13 forest patches in each MEA consistent with Stand and Site Guide prescribed ranges
14 (Table 24).

15 Rationale for Desirable and Target Levels: The Stand and Site Guide prescribes that all
16 young forest patches in MEAs be less than 500 ha in size, to maximize the functional
17 habitat for moose habitat. While the majority of young forest in MEAs meets the
18 desirable frequency by size classes at Plan Start (2022), there are some larger patches
19 of young forest that are not desirable, particularly in the South English River MEA.
20 Target levels are to move towards or maintain the desirable frequency by size class for
21 the three smallest size classes. This target was accepted by the Planning Team in
22 recognition that landscape pattern indicators may take more than one 10-year plan
23 period to achieve desirable levels and the smallest three size classes correspond to the
24 Stand and Site Guide direction.
25

1 **Table 24** Desirable and Target Levels for Young Forest Frequency by MEA
2

Moose Emphasis Area	Indicator – Young Forest Patch Size Class (ha)	Plan Start 2022	Desirable Level	Target (2032)
MEA #1: Aulneau Peninsula	< 100	93%	100% of young forest patches in the <100, 101-250 ha, and 251-500 ha size classes.	Move towards or maintain the young forest patch size frequency for the smallest three size classes
	101-250	7%		
	251-500	0%		
	501-1,000	0%		
	1,001-2,500	0%		
	2,501-5,000	0%		
	5001-10,000	0%		
	10,001-20,000	0%		
	>20,000	0%		
MEA #2: Maybrun	< 100	67%		
	101-250	15%		
	251-500	11%		
	501-1,000	7%		
	1,001-2,500	0%		
	2,501-5,000	0%		
	5001-10,000	0%		
	10,001-20,000	0%		
	>20,000	0%		
MEA #3: North English River	< 100	64%		
	101-250	17%		
	251-500	19%		
	501-1,000	0%		
	1,001-2,500	0%		
	2,501-5,000	0%		
	5001-10,000	0%		
	10,001-20,000	0%		
	>20,000	0%		
MEA #4: South English River	< 100	37%		
	101-250	32%		
	251-500	4%		
	501-1,000	25%		
	1,001-2,500	2%		
	2,501-5,000	0%		
	5001-10,000	0%		
	10,001-20,000	0%		
	>20,000	0%		

3

3.6.2.5 Objective 5: Forest Access**Objective 5: Forest Access:**

“To provide road-based access, land use and recreational opportunities through road maintenance and development of access to areas planned for harvest within the plan period.”

This objective addresses several of the desired forest and benefits identified by the Local Citizens’ Committee and Indigenous communities for roads and recreational opportunities, maintain areas of remoteness, maintaining the productive land base, and jobs related to the forest industry (see Section 3.4). It also is associated with a mandatory indicator of road density from the *Forest Management Planning Manual* (MNRF, 2020) required for this FMP.

Indicator 5a: Density of Primary and Branch Roads

Timing of Assessment: Year 5 Annual Report, and Annual Report for final year of plan implementation.

How Measured: The length (km) of primary and branch SFL responsibility road on the forest is measured and divided by the area of Crown productive forest (in km²).

Desirable Level: Maintain primary and branch SFL road density of ≤ 0.14 km/km² Crown productive forest in the caribou zone, and ≥ 0.14 km/km² Crown productive forest in the non-caribou zone.

Rationale for Desirable and Target Levels: The Planning Team discussed and decided to split this indicator into 2 parts: one for the caribou zone and one for the remainder of the Kenora Forest. Caribou habitat management and limiting linear features suggested that a maximum road density was appropriate for the caribou zone, whereas a minimum road density in the non-caribou zone was consistent with several desired forest and benefits, and socio-economic management objectives.

The Plan Start (2022) road density of primary and branch roads on the Kenora Forest with SFL responsibility is 0.02 km/km² of productive forest in the caribou zone (very limited forest access to date), and 0.08 km/km² in the non-caribou zone. The desirable level for road density was calculated on the estimated road construction needed to access the Kenora Forest to 2102 (next 80 years) which equates to a density of 0.14 km/km². This road density desirable level was used as a long-term maximum for the caribou zone, and a minimum for the non-caribou zone.

3.6.2.6 Objective 6: Wood Supply**Objective 6: Wood Supply:**

“To provide a predictable and continuous supply of wood to the forest products industry from the Kenora Forest.”

This objective is carried forward from the 2012-2022 FMP and also meets the requirement of the FMPM for indicators of Managed Crown Available Forest, Long-term Projected Harvest Area and Volumes and Actual Harvest Areas and Volumes. Short-term wood supply was an identified Desired Forest and Benefit, as well as long-term sustainable wood supply and wood available for personal use. This objective also addresses a desired forest and benefit of forest-related jobs identified by the Local Citizen’s Committee and Indigenous communities.

Indicator 6a: Area of Managed Crown Forest Available for Timber Production

Timing of Assessment: Year 5 Annual Report, and Annual Report for final year of plan implementation.

How Measured: Analysis of SFMM projections through time for Ownership 1 Managed Crown forest available for timber production.

Desirable Level: Maintain a minimum of 493,000 ha of Managed Crown forest available for timber production over the next 100 years.

Rationale for Desirable and Target Levels: Plan Start level of available forest is 503,772 ha and is expected to decline slightly through time with planned construction of primary and branch roads over the next 80 years. The desirable level of maintaining a minimum of 493,000 ha available forest was proven reasonable through strategic modelling for the 2022-2032 FMP. The target level for this 10-year plan period is to the same as the desirable level. The 2022-2032 FMP desirable level is higher than the desirable level in the 2012-2022 FMP (378,000 ha) which was based on the previous forest resources inventory (plan start available forest in 2012-2022 was 379,669 ha 124,000 ha lower than available forest at the start of this FMP). The change in forest resources inventories accounts for the increase in available forest area between FMPs due to significant reclassification of unproductive rock and Protection Forest to productive forested land (detailed in Section 2.1.2).

Indicator 6b: Long-term Projected Available Harvest Area

Timing of Assessment: Completion of Proposed LTMD.

How Measured: Analysis of SFMM projections of annual available harvest area through time.

1 Desirable Level: Highest long-term AHA required to balance objective achievement and
2 operational considerations.

3 Rationale for Desirable and Target Levels: Strategic modelling did not include any
4 minimum constraints for available harvest area, but rather included targets for harvest
5 volume (Indicator 6c) as well as constraints for several other management objectives.
6 The Planning Team recognized that the amount of harvest area was less critical to the
7 viability of the forest industry supplied with fibre from the Kenora Forest, and the direct
8 and indirect forest-related jobs associated with harvest, than was the resulting available
9 harvest volume (Indicator 5c). The acceptable target level is the same as the desirable
10 level.
11

12 **Indicator 6c: Long-term Projected Available Harvest Volume by Species Group**

13

14 Timing of Assessment: Completion of Proposed LTMD.

15 How Measured: Analysis of SFMM projections of annualized available harvest volume
16 by major species group through time.

17 Desirable Level: The desirable level is to meet or exceed recognized wood supply
18 commitments (reported by volume by major species group)(Table FMP-10).

19 Rationale for Desirable and Target Levels: The Planning Team recognized that harvest
20 volume was critical to continued viability of the forest industry in the Kenora area, and
21 the direct and indirect forest-related jobs associated with harvest volumes from the
22 Kenora Forest (identified desired forest and benefits). Some volume targets will be
23 used in strategic modelling to try to maximize harvest volumes, and to meet or exceed
24 current wood supply commitments, while balancing other objectives (particularly BLG
25 indicators). The desirable level reflects consideration for wood supply commitments
26 and desirable harvest volume level by major species groups. The acceptable target
27 level is the same as the desirable level.
28

29

30 **Indicator 6d: Long-term Available Harvest Volume by Broad Size**

31

32 This is a new objective indicator required by the *Forest Management Planning Manual*
33 (2020). Broad size groups of small and large timber volume were used for this FMP
34 (Supplementary Documentation B – Analysis Package, Section 6.2.2.5).

35

36 Timing of Assessment: Completion of Proposed LTMD.

37 How Measured: Analysis of SFMM projections of available harvest volume per year by
38 broad size group through time.

39 Desirable Level: Maintain or increase the proportion of large volume, as compared to
40 2022 Plan Start.

41 Rationale for Desirable and Target Levels: Desirable and target levels are the same.

1 The proportion of small and large volume at Plan Start (2022) comes from the strategic
2 model. There are markets for all wood from the Kenora Forest, however maintaining or
3 increasing the large volume was considered by the Planning Team to be reasonable
4 given the healthy sawlog demand from the forest.
5

6 **Indicator 6e: Actual Harvest Area as a Percentage of Planned, by Forest Unit**

7
8 Timing of Assessment: Year 5 Annual Report, and Annual Report for final year of plan
9 implementation.
10 How Measured: % of the planned harvest area by forest unit actually harvested
11 Desirable Level: 80% or 90% up to 100% of the planned harvest area by forest unit
12 actually harvested. Desirable level is a minimum of 90% for the larger forest units:
13 CMX, HMX, HRD, PJD, PJM, and POD. Remaining forest units have a desirable level
14 of a minimum of 80% of planned actually harvested (BFM, PRW, SBD, SBL and SBM).
15 Rationale for Desirable and Target Levels: The desirable level is generally to harvest at
16 least 90% of the planned harvest area in this FMP. It is easier to implement operational
17 harvest blocks for the larger forest units that have more area available to allocate (min.
18 90% desirable level). Smaller forest units often have eligible stands that are more
19 scattered, making it more difficult to implement economic and operationally feasible
20 harvest opportunities (min. 80% desirable level). The target levels for this plan period
21 are the same as the desirable levels by forest unit.
22

23 **Indicator 6f: Actual Harvest Volume as a Percentage of Planned, by Major**
24 **Species Group**

25
26 Timing of Assessment: Year 5 Annual Report, and Annual Report for final year of plan
27 implementation.
28 How Measured: % actual harvest volume 2022-2032 by species group divided by
29 planned harvest volume by species group.
30 Desirable Level: Minimum 80 or 90% (varied by volume species group) of the planned
31 harvest volume by species group actually harvested.
32 Rationale for Desirable and Target Levels: Desirable level is to realize 100% of the
33 planned harvest volume for major species groups during plan implementation. While
34 strategic planning must be undertaken assuming 100% utilization, the planning team
35 considered it reasonable and attainable to allow flexibility for a lower target volume
36 utilization, as it is subject to market conditions, and demand for tree species that are
37 dependent on harvested forest types. The target volume utilization is 90% for each of
38 the major species groups (Spruce-Pine-Fir and Poplar), and a minimum of 80% for Red
39 Pine – White Pine and White Birch.
40

3.6.2.7 Objective 7: Indigenous Engagement**Objective 7: Indigenous Engagement:**

“To engage during plan development Indigenous communities.”

The *Forest Management Planning Manual (2020)* requires a mandatory indicator to be assessed concerning First Nation and Métis community involvement in plan development.

Indicator 7a: Opportunities for Involvement of Indigenous communities and the Métis Nation of Ontario in Plan Development

Timing of Assessment: Draft Plan (Table FMP-10).

How Measured: Review of list of affected First Nation and Métis communities and review of First Nation and Métis Consultation Summaries to ensure all communities were contacted and encouraged to participate during Stages 1-3.

Desirable Level: 100% of the 16 Indigenous communities within or adjacent to the Kenora Forest and the Métis Nation of Ontario be provided opportunities to contribute information during plan development.

Rationale for Desirable and Target Levels: It is desired for all (100%) affected First Nation and Métis communities to participate in the planning process. The target level is the same as the desirable level. Contact very early in the planning process will provide the greatest opportunity for involvement, and will ensure all affected First Nation communities and the Métis Nation of Ontario are aware of opportunities for engagement in plan development, background information and values identification. Regular communication will also inform communities of their opportunity to develop a customized approach to First Nation and Métis consultation.

3.6.2.8 Objective 8: Local Citizens' Committee Engagement**Objective 8: LCC Engagement:**

“To have the Local Citizens' Committee (LCC) effectively participate in the development of the management plan.”

Indicator 8a: LCC Self-evaluation of its Effectiveness in Plan Development

Timing of Assessment: Draft Plan (Table FMP-10).

How Measured: Analysis of LCC effectiveness survey completed by LCC members.

1 Desirable Level: LCC Effectiveness survey results indicate at least 70% overall
2 effectiveness in the development of the forest management plan.

3 Rationale for Desirable and Target Levels: A 50% effectiveness ranking implies neither
4 effectiveness nor ineffectiveness. Therefore a 60% effective ranking was determined to
5 be the minimum target level, however more favourable results (70%+) are expected as
6 the desirable level. NDMNRF district staff and Miisun staff, including the Plan Author,
7 have history of good, regular on-going communication with the Kenora LCC, therefore
8 the desirable level was considered quite reasonable for this FMP.
9

10 3.6.2.9 Objective 9: Forest Renewal

11

12 **Objective 9: Forest Renewal:**

13 “To effectively regenerate harvest areas consistent with the regeneration standards
14 outlined in the Silvicultural Ground Rules (Table FMP-4).”
15

16 This objective is related to objectives carried forward from the 2012-2022 FMP. This
17 objective is associated with mandatory indicators from the *Forest Management Planning*
18 *Manual* (2020) required for this FMP.
19

20 The achievement of these forest renewal indicators will demonstrate that the silvicultural
21 strategies implemented in the FMP (Section 4.2.2.2 Silvicultural Ground Rules) are on
22 track to achieve the desired future forest condition as projected in the LTMD (Section
23 3.7). These silvicultural strategies include treatments that move towards achievement
24 of objective indicators for forest composition, age and landscape pattern, as well as
25 sustainable achievement of socio-economic indicators in the future.
26

27 **Indicator 9a: Percent of Harvested Forest Area Assessed as Successfully** 28 **Established, by Forest Unit**

29

30 Timing of Assessment: Year 5 Annual Report, and Annual Report for final year of plan
31 implementation.

32 How Measured: Identify hectares harvested by plan period from previous Annual
33 Reports and Year 5 and final Annual Reports. Identify areas declared successfully
34 established by plan period and determine % success by forest unit. Compare to
35 desirable and target % by forest unit. Successful establishment based on regeneration
36 standards in Table FMP-4 Silvicultural Ground Rules.

37 Desirable Level: 95-100% of the harvested area successfully established (meeting
38 establishment standards in Table FMP-4 SGRs).

1 Rationale for Desirable and Target Levels: While it is desirable that all harvested areas
2 successfully meet regeneration standards, there is approx. 2% loss due to road
3 construction. The target level reflects that certain sites may slightly under achieve
4 forest productivity, or need additional time after surveying to reach establishment
5 standards. The desirable is 95% achievement recognizes that some harvested areas
6 may require slightly more time to reach the average establishment standards of an
7 SGR. Target level is the same as the desirable level.

8
9 **Indicator 9b: Planned and Actual Percent of Harvest Area Treated by Broad**
10 **Treatment Type**

11
12 Timing of Assessment: Year 5 Annual Report, and Annual Report for final year of plan
13 implementation.

14 How Measured: Planned (target): Identify proportion of broad treatment types of
15 Natural, Plant and Seed for planned harvest areas for plan period from the LTMD
16 scenario, and express as a percent of total regeneration area for plan period. Actual:
17 Identify hectares treated by broad treatment type for the plan period from Annual
18 Reports and express as percent of total regeneration area for the plan period.

19 Desirable Level: Minimum of 90% of the projected treatment percentage actually
20 treated by the planned broad treatment type.

21 Rationale for Desirable and Target Levels: Treatment types were identified as Natural,
22 Plant and Seed with a target achievement of 90% of planned. Target level is for >=
23 70% of the projected percentage of treatment by broad treatment type to be conducted.
24 It is important that renewal treatment efforts match the level of intensity projected by the
25 LTMD and these levels were determined to be necessary to achieve the long-term
26 management objectives for the forest. However variation in chosen broad renewal
27 treatments may be acceptable if similar results can be achieved through less intensive
28 or less costly methods, or if in fact an area requires more intensive treatment to achieve
29 desirable results. Where one intensity level is overachieved, another is underachieved
30 compounding the variance from planned when this indicator is reported. Therefore it
31 was considered that a desirable level of a minimum of 90% treatment to planned
32 treatment types was reasonable.

33
34 **Indicator 9c: Planned and Actual Percent of Area Successfully Regenerated to**
35 **the Target Forest Unit, over the entire forest**

36
37 While regeneration success of established stands is expected, there may be some
38 areas that regenerate to forest units other than those originally planned. This indicator
39 is a measure of silvicultural success and planning assumptions. Variance may or may

1 not be critical to overall strategic objective achievement, but should be assessed and
2 considered in development of future FMPs.

3
4 Timing of Assessment: Year 5 Annual Report, and Annual Report for final year of plan
5 implementation.

6 How Measured: Planned: Percentages from strategic modelling LTMD results for
7 harvested forest unit to future regenerated forest units (recorded in Table FMP-10a).
8 Actual: Identify hectares harvested by plan period by forest unit from previous Annual
9 Reports and Year 5 and final Annual Reports. Identify hectares declared successfully
10 established (according to FMP-4 SGRs) by plan period and forest unit, then calculate %
11 of harvested area by forest unit by broad treatment applied. Compare planned to actual
12 rates by forest unit by broad treatment type.

13 Desirable Level: Achieve within +/- 5% of the percentage projected to be renewed to the
14 target future forest unit, by harvested forest unit and broad treatment type, as compared
15 to Table FMP-10a.

16 Rationale for Desirable and Target Levels: Target level allowed slightly more variance
17 from the desirable level with the target of +/- 10% of the percentage projected to be
18 renewed to the target future forest unit, by harvested forest unit and broad treatment
19 type, as compared to Table FMP-10a. The desirable and target levels recognize that
20 regeneration to forest units other than originally planned is not “as planned”, but may
21 still result in acceptable future forest conditions that are consistent with the strategic
22 post-harvest renewal transitions in the LTMD. The statistical difference between a
23 planned and unplanned forest unit transition may not be significant (e.g. only 1-2%
24 difference in a hardwood component may change the resulting forest unit), therefore
25 increased flexibility in the definition of planning success needs to be recognized in the
26 target level. Lower achievement does not mean that the forest is not being regenerated
27 effectively, but it does reflect the change in forest units on certain sites through time.

3.6.2.10 Objective 10: Forest Values

Objective 10: Forest Values:

“To implement forestry operations in a manner that minimizes negative impacts on all identified resource users, and protects all identified values.”

35
36 This objective consolidates several indicators from the 2012-2022 FMP, and is also
37 associated with a mandatory compliance indicator from the *Forest Management*
38 *Planning Manual* (2020) required for this FMP. This indicator also addresses several
39 Desired Forest and Benefits meeting comments on wildlife habitat, Species At Risk,
40 cavity tree retention, and monitoring and compliance.

1
2 **Indicator 10a: Percent of Forest Operation Inspections in Non-Compliance, by**
3 **activity and remedy type**

4
5 Timing of Assessment: Year 5 Annual Report, and Annual Report for final year of plan
6 implementation.

7 How Measured: Percentage of compliance reports in non-compliance divided by total
8 number of compliance reports, by activity and remedy type.

9 Desirable Level: 0% of Forest Operations Inspection Program (FOIP) inspections
10 reported as non-compliant, by activity and remedy type.

11 Rationale for Desirable and Target Levels: The desirable level indicates the intent to
12 successfully implement forest management activities so that 100% of FOIP compliance
13 inspections are reported in compliance (0% non-compliance). The target level of a
14 maximum of 5% non-compliance annually recognizes that while not desirable, an
15 incidence of non-compliance may occur. The maximum allowance for 5% non-
16 compliance is a reasonable level given the importance of successfully implementing
17 appropriate forest management activities.

18
19
20 **3.6.2.11 Objective 11: Healthy Ecosystems**

21
22 **Objective 11: Healthy Ecosystems:**

23 "To maintain productivity of soil function, and to protect water quality and fisheries
24 habitat where forest management activities occur in the Kenora Forest."

25
26 This objective is carried forward from the 2012-2022 FMP, and is also associated with a
27 mandatory compliance indicator from the *Forest Management Planning Manual* (2020)
28 required for this FMP.

29
30 **Indicator 11a: Compliance with Management Practices that Prevent, Minimize, or**
31 **Mitigate Site Damage (% of inspections in non-compliance by**
32 **activity and remedy type)**

33
34 Timing of Assessment: Year 5 Annual Report, and Annual Report for final year of plan
35 implementation.

36 How Measured: For Forest Operations Inspections of Management Practices that
37 Prevent, Minimize, or Mitigate Site Damage: Percentage of compliance reports in non-
38 compliance divided by total number of compliance reports, by activity and remedy type.

1 Desirable Level: 0% of Forest Operations Inspection Program (FOIP) inspections
2 reported as non-compliant with management activities that prevent, mitigate or minimize
3 site damage, by activity and remedy type.

4 Rationale for Desirable and Target Levels: The desirable level indicates the intent to
5 successfully implement forest management activities so that 100% of FOIP compliance
6 inspections reported in compliance with management activities that prevent, mitigate or
7 minimize site damage (0% non-compliance). The target level of a maximum of 5% non-
8 compliance annually recognizes that while not desirable, an incidence of non-
9 compliance may occur. The maximum allowance for 5% non-compliance is a
10 reasonable level given the importance of successfully implementing appropriate forest
11 management activities in a manner that prevents, mitigates or minimizes site damage.

12

13 **Indicator 11b: Compliance with Management Practices that Protect Water Quality**
14 **and Fish Habitat (% of inspections in non-compliance, by activity**
15 **and remedy type)**

16

17 Timing of Assessment: Year 5 Annual Report, and Annual Report for final year of plan
18 implementation.

19 How Measured: For Forest Operations Inspections of management activities that
20 protect water quality and fish habitat: Percentage of compliance reports in non-
21 compliance divided by total number of compliance reports, by activity and remedy type.

22 Desirable Level: 0% of Forest Operations Inspection Program (FOIP) inspections
23 reported as non-compliant with management activities that protect water quality and fish
24 habitat.

25 Rationale for Desirable and Target Levels: The desirable level indicates the intent to
26 successfully implement forest management activities so that 100% of FOIP compliance
27 inspections are reported in compliance with management activities that protect water
28 quality and fish habitat. The target level of a maximum of 5% non-compliance annually
29 recognizes that while not desirable, an incidence of non-compliance may occur. The
30 maximum allowance for 5% non-compliance is a reasonable level given the importance
31 of successfully implementing appropriate forest management activities in a manner that
32 protects water quality and fish habitat.

3.7 Long-Term Management Direction

3.7.0 Introduction

FINAL PLAN NOTE: The following Long-Term Management Direction (LTMD) section and subsections were developed and documented for Stage Two: Review of LTMD (NDMNRFF-endorsement received - Progress Checkpoint #6), and documented for Stage Three (Review of Proposed Operations) and Stage Four (Review of Draft Forest Management Plan). In 2021, wildfire burnt significant area in the northern portion of the Kenora Forest. Changes in estimated Plan Start forest condition resulting from these wildfires is documented in Section 2.1 Forest Condition.

After the wildfires before final plan submission, the LTMD was reviewed and revised Planned Operations (Section 4.3) were analyzed for consistency with LTMD (Section 4.9). It was agreed by NDMNRFF that LTMD was still valid and would not be changed for the final FMP. **The following subsections reflect the decisions made during development of the LTMD, as reviewed in the Draft Forest Management Plan (June – Sept. 2021).**

The Long-Term Management Direction (LTMD) is the management objectives, indicators, assessment of sustainability, social and economic assessment, and levels of activities required to achieve the desired forest and benefits and provide for the sustainability of the forest for the management unit.

Strategic modelling with SFMM was conducted to determine the location, types, and levels of activities (i.e., access, harvest, renewal and tending) required to manage forest cover and balance the achievement of management objectives.

The Long-Term Management Direction is described in the following subsections (and FMP tables):

- 3.7.0 Introduction
 - 3.7.0.1 Analysis Package
 - 3.7.0.2 Forest Condition for the Crown Productive Forest (FMP-6)
 - 3.7.0.3 Habitat for Selected Wildlife Species (FMP-7)
- 3.7.1 Available Harvest Area and Volume
 - 3.7.1.1 Available Harvest Area by Forest Unit (FMP-8)
 - 3.7.1.2 Available Harvest Volume by Species Group and Broad Size Group (FMP-9)
- 3.7.2 Selection of Areas for Harvest

- 1 3.7.3 Assessment of Objective Achievement (FMP-10)
- 2 3.7.4 Spatial Assessment of Projected Harvest Area
- 3 3.7.5 Social and Economic Assessment
- 4 3.7.6 Risk Assessment
- 5 3.7.7 Overall Preliminary Determination of Sustainability

6

7 The LTMD was presented to and accepted by the Planning Team and Local Citizens’
8 Committee, and endorsed by the Regional Director, NDMNRF Northwest Region.
9 Public review of the LTMD during FMP production included opportunities at Stage Two -
10 Review of Proposed Long-Term Management Direction, and Stage Three – Review of
11 Proposed Operations.



1 **3.7.0.1 Analysis Package**

2

3 Strategic modelling was conducted to determine the location, types, and levels of
4 activities (i.e., access, harvest, renewal and tending) required to manage forest cover to
5 balance the achievement of management objectives. Strategic modelling was
6 conducted with the use of SFMM and Ontario's Landscape Tool. Outputs of strategic
7 forest modelling have been submitted to NDMNRF with the FMP in digital form.

8

9 The key decisions made during development of the Long-Term Management Direction
10 model are documented in Supplementary Documentation B – Analysis Package,
11 Section 9.

12

13 A process of repetitive analyses was conducted to balance the achievement of
14 management objectives while developing a LTMD for the Kenora Forest. The Long-
15 Term Management Direction was developed through an iterative process of adding
16 modelling constraints to the SFMM Base Model without harvest options to build to and
17 reach a good balance of management objective achievement and operational reality
18 (described in Supp. Doc. B – Analysis Package, Section 9).

19

20 Results or findings of analyses and investigations were used to guide the balancing of
21 management objectives. The LTMD represents a balance in the achievement of
22 management objectives. The final LTMD model run (LTMD-07) is included in digital
23 format in the electronic version of the FMP in folder MU644_2022_MDL.zip. Modelling
24 outputs from the LTMD, showing how the forest is expected to develop over time in
25 terms of forest composition and structure, and the projected types and levels of
26 activities required to achieve management objectives are summarized in Supplementary
27 Documentation B – Analysis Package, Sections 9.2 and 9.3 and Appendix 8.

28

29 A summary of how the management objectives were represented in the analysis is
30 included in Supplementary Documentation B - Analysis Package, Section 9.1. The
31 Analysis Package also includes a summary of changes made to the base model, and
32 how the achievement of objectives was interpreted from the model results.

3.0 LONG-TERM MANAGEMENT DIRECTION

Projected Forest Condition for the Crown Productive Forest

1 **3.7.0.1 Projected Forest Condition for the Crown Productive Forest**

2

3 The forest condition for the Crown Productive Forest projected in the Long-Term
4 Management Direction is documented in Table FMP-6 by forest unit and age class. This
5 information is derived from outputs from the SFMM model dataset. The productive
6 forest includes managed area as well as parks and protected areas.

7

8 The Crown productive forest at 2022 Plan Start is 652,253 hectares as calculated from
9 the Base Model Inventory (Table FMP-1). Table FMP-6 records 652,254 ha at 2022,
10 due to rounding of forest unit areas (matches). The SFMM modelling land base used
11 for long-term area projections for this FMP for Plan Start (2022) was also 652,254 ha
12 (Table FMP-1b) with the total of available and reserve Crown land (modelling land base
13 matches inventory).

14

15 The productive land base is projected to decrease 2% over 100 years to 636,724
16 hectares (Table FMP-6). This decrease in productive forest area is a result of projected
17 conversion of harvested area to non-productive roads and landings. New forest access
18 is estimated to be required for approximately 80 years, to access all parts of the DCHS
19 in the caribou zone on the Kenora Forest, and to access currently unaccessed areas in
20 the rest of the forest.

21

22 Overall, the decrease in Crown productive forest area over the next 100 years is not
23 projected to be significant, and results from the strategic modelling to achieve a balance
24 of achievement of varied management objectives. In particular, objectives for forest
25 composition and age structure required by the Boreal Landscape Guide influence the
26 changes by forest unit in the future forest condition. Specifically achievement of
27 Indicator 2a: Landscape Class Area, Indicator 2d: Upland Pine and Spruce forest area,
28 as well as Indicator 5c: Long-term Harvest Volume influence projected forest unit area
29 through time. Section 3.7.3 describes the assessment of objective achievement.

30

31 Table 25 summarizes the amount of change in productive forest unit area over the 100-
32 year planning horizon. Forest units with less than a 30% change are shaded grey. The
33 forest units are listed from the greatest percentage increase in area, down to the
34 greatest decrease percentage in area.

35

36 Most forest units are projected to have a relatively stable area through the next 100
37 years (+/- 30% from Plan Start (2022)). The forest units projected to significantly
38 increase are SBD, PJM and BFM. Forest units projected to significantly decrease are
39 HMX and HRD, with projected conversion to conifer-dominated forest or poplar. As
40 noted above, the projected changes in productive area by forest unit are a result of
41 balancing overall objective achievement from implementation of the LTMD renewal

3.0 LONG-TERM MANAGEMENT DIRECTION

Projected Forest Condition for the Crown Productive Forest

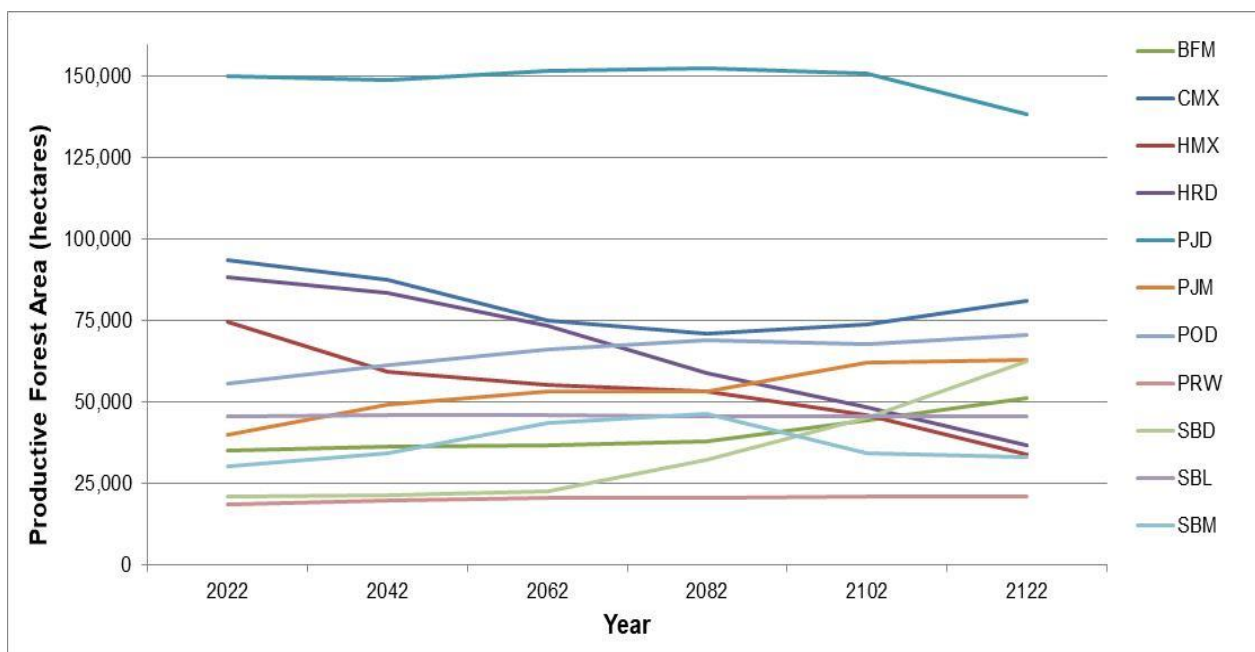
1 projections and limited changes from aging of the forest (natural succession). Therefore
 2 the implications to these changes by forest unit are positive for overall forest
 3 sustainability as these changes meet long-term management objectives, as further
 4 described by management objective in Section 3.7.3.
 5

6 **Table 25 Change in Productive Forest Area by Forest Unit**
 7

Forest Unit	Productive Forest Area:				
	2022	2122	Change	Ha	%
SBD	20,977	62,574	increase	41,597	198%
PJM	39,912	62,798		22,887	57%
BFM	34,934	51,142		16,208	46%
POD	55,484	70,492		15,008	27%
SBM	30,253	33,151		2,898	10%
PRW	18,488	21,125		2,637	14%
SBL	45,724	45,726	similar	2	0%
PJD	150,031	138,446		- 11,585	-8%
CMX	93,667	80,989	decrease	- 12,678	-14%
HMX	74,582	33,734		- 40,847	-55%
HRD	88,202	36,546		- 51,656	-59%
TOTAL	652,254	636,724		- 15,530	-2%

8
 9
 10 The projected Crown productive forest area by forest unit for the next 100 years is also
 11 illustrated in Figure 27.
 12

13 **Figure 27 Projected Crown Productive Forest Unit Area Through Time**
 14



15
 16



3.7.0.2 Habitat for Selected Wildlife Species

Selected Wildlife Species can be identified for specific consideration by the Planning Team in FMP development. Caribou and Moose are selected wildlife species in the 2022-2032 FMP that require specific projected habitat modelling in their respective habitat emphasis areas (see Table FMP-7).

Caribou habitat in the caribou zone was managed as a primary management objective in strategic modelling and planned operations. To reflect the consideration during LTMD development, Table 26 below reflect data for caribou habitat in Table FMP-7. The discussion of caribou habitat is included in Section 3.7.3.1 Objective 1: Caribou Habitat.

Table 26 Projected Caribou Habitat in Caribou Zone Through Time

Species	Habitat Area (ha)					
	2022	2042	2062	2082	2102	2122
Caribou - refuge	71,994	70,061	73,525	74,354	73,705	74,732
Caribou - winter combined	29,678	60,218	59,823	58,541	52,656	54,570

Data derived from results of the SFMM LTMD-07. Habitat reported for beginning of each 20-year period.

Moose habitat is planned for and considered based on various BLG indicators for the whole forest and within identified Moose Emphasis Areas (MEAs). See Table FMP-10 for current and projected moose habitat in MEAs (by habitat type).

Habitat for all species that inhabit the Kenora Forest are accounted for through the management of forest composition, age structure and landscape pattern required by management indicators and milestones, in accordance with the *Forest Management Guide for Boreal Landscapes* (BLG). See Table FMP-10 for Boreal Landscape Guide indicator projections for caribou and moose habitat in their respective emphasis areas.

3.7.1 Available Harvest Area and Volumes

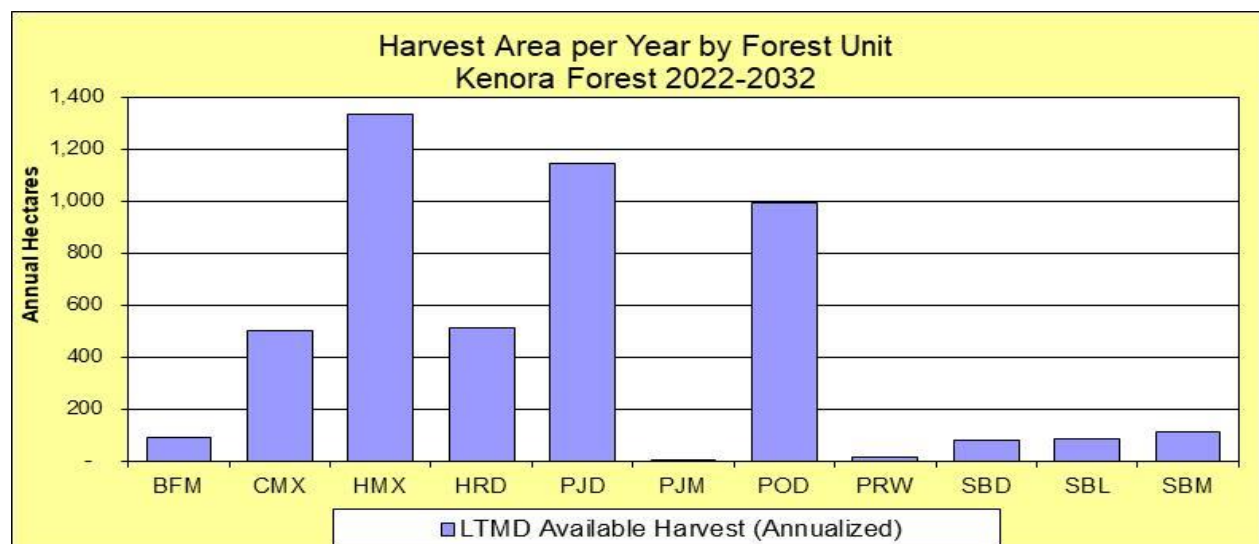
The available harvest area associated with the LTMD is discussed in Section 3.7.1.1. The harvest volume resulting from the available harvest area is discussed in Section 3.7.1.2 by major tree species group and broad size group. The spatial distribution of harvest over the first four FMP periods (i.e. 40 years) is discussed in Section 3.7.3.3.

3.7.1.1 Available Harvest Area

A set of criteria was developed in order to identify the areas that could reasonably be harvested during the 2022-2032 period of the Kenora Forest FMP. The Available Harvest Area (AHA) by forest unit (which was derived from the SFMM outputs for the proposed LTMD) was the primary criterion for the selection of “preferred harvest areas”. Harvest areas are planned to match, but not exceed, the projected available harvest areas by forest unit during the 10-year plan period. NDMNRFs *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (MNR, 2010) and the *Forest Management Guide for Boreal Landscapes* (MNR, 2014) provided additional direction.

Based on these eligibility and selection criteria, a total of 48,587 hectares of preferred harvest area were identified at the LTMD stage for harvest for the 10-year plan period. The LTMD projected Available Harvest Area by forest unit is documented in Table FMP-8 (projected available harvest area over a 100-year planning horizon 2022-2122). The 2022-2032 FMP annual projected available harvest area by forest unit is portrayed graphically in Figure 28 (4,859 ha per year, 48,587 ha for the 10-year plan period).

Figure 28 Annualized Available Harvest Area by Forest Unit 2022-2032

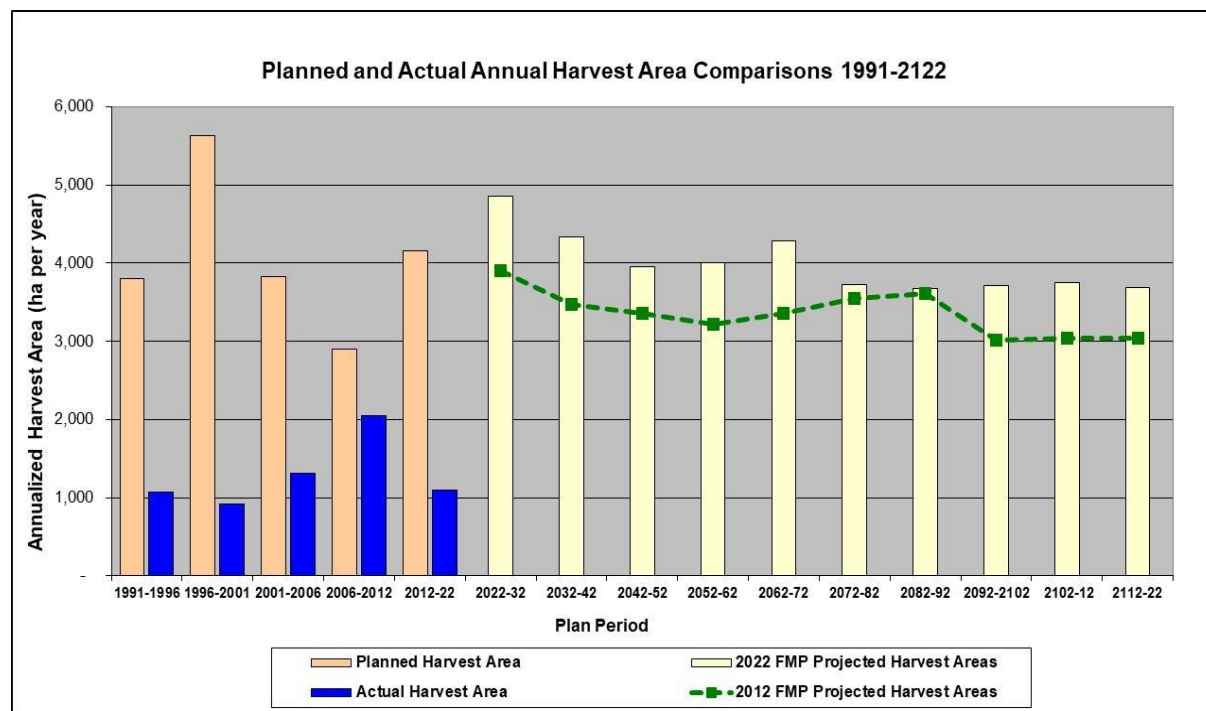


1 The forest unit with the greatest annualized available harvest area is the HMX forest
 2 unit (27%), followed by PJD (24%), and POD (20%). CMX and HRD each comprise
 3 10% of the available harvest area. The remaining forest units all combined account for
 4 the remaining 9% of the available harvest area (BFM 2%, SBD 2%, SBL 2%, SBM 2%
 5 and incidental areas of PRW and PJM).

6
 7 The LTMD available harvest area level is greater than the 2012 FMP available harvest
 8 area (4,859 ha versus 4,158 ha per year in the 2012 FMP). The increase in projected
 9 available harvest area results from a continuation of the strategic direction for the
 10 Kenora Forest with minor adjustments to modelling assumptions and revised desirable
 11 levels for management objective indicators. Timing of BLG indicator achievement and
 12 continuation of the management strategic to convert some hardwood and mixedwood
 13 forest types to upland conifer was a major influence on harvest area projections.

14
 15 The projected available harvest area trend over the 100-year planning horizon is
 16 documented in Table FMP-8 and portrayed graphically in Figure 29. A comparison of
 17 projected harvest areas to past planned and actual harvest areas (1991-2022) is also
 18 included in the graph. The 2022 FMP AHA of 4,859 ha per year was determined by the
 19 Planning Team as the amount of harvest area that projected the best balance of
 20 management objective achievement now and for the future in terms of desirable forest
 21 condition and desirable social and economic benefits from the forest (Section 3.7.3).

22
 23 **Figure 29 Planned and Actual Annual Harvest Area Comparisons 1991-2122**
 24



25



1 Annual total harvest areas are projected to average approximately 3,997 hectares per
2 year for the next 100 years (vary from 3,670 to 4,859 ha per year), slightly higher than
3 projections in the 2012 FMP (3,354 ha per year over 100 years). Variation in projected
4 harvest areas between 10-year periods results from the age class distribution of the
5 forest and the amount of area required to be retained for BLG indicator areas (amount
6 of Landscape Class mature-older forest areas, old growth forest, upland conifer, young
7 forest, etc.), as well as optimizing harvest volumes for socio-economic benefits from the
8 Kenora Forest. Long-term strategic planning trends in projected harvest area remain
9 similar between plans with minor changes resulting from improvements and refinements
10 of modelling assumptions, changes in guide implementation and revised desirable
11 levels for management objective indicators.

12
13 A rough comparison of Available Harvest Area by forest unit for the 2012-2022 FMP
14 and the 2022-2032 FMP has been undertaken. The 2022-2032 FMP forest units
15 include aggregations of Northwest Region Standard Forest Units (SFU), and each SFU
16 is classified into only one plan forest unit (very clean sort / roll-up). The forest units from
17 the 2012-2022 FMP included aggregations of the same SFUs, however not all regional
18 SFUs were classified wholly into one forest unit (some splitting of SFU into multiple plan
19 forest units occurred). There were 12 forest units in 2012, however the classification of
20 area into the 12 2022 forest units has been refined. The comparison of the 10-year
21 AHA for 2012 and 2022 FMPs is included in Table 27. A rough comparison of AHA by
22 forest unit between the 2012 and 2022 FMPs has been made and as noted above the
23 total AHA increased between FMPs by 17%.

24
25 **Table 27 Comparison of 10-year AHA by Forest Unit 2012 and 2022 FMPs**

2012 FMP Forest Units			2022 FMP Forest Units			Comparison 2022 to 2012		
Code	10-year AHA (ha)	Primary Regional Standard Forest Units	Code	10-year AHA (ha)	Regional Standard Forest Units	2022 Forest Unit	Change (%)	Comment
BFM	146	BfMx1, BfPur	BFM	905	BfMx1, BfPur	BFM	522%	increase
CMX	8,678	ConMx, UplCe	CMX	5,009	ConMx, UplCe	CMX	-42%	decrease
HMX	12,060	HrdMw, HrDom, BwDee, BwSha	HMX	13,323	HrdMw	HMX	10%	increase
			HRD	5,093	HrDom, OthHd, BwDee, BwSha	HRD	new	was combined in 2012 HMX, overall increase, includes OTH
OTH	441	OthHd						
PJD	3,584	PjSha, PjDee	PJD	11,436	PjDee, PjSha	PJD	219%	increase
PJM	7,450	PjMx1	PJM	42	PjMx1	PJM	-99%	significant decrease
POD	5,384	PoDee, PoSha	POD	9,907	PoDee, PoSha	POD	84%	increase
PRW	935	PrwMx, PwDom, PrDom	PRW	141	PrwMx, PwDom, PrDom	PRW	-85%	significant decrease
SPD	557	SbDee, SbSha, SbMx1, BfMx1	SBD	768	SbDee, SbSha	SBD	38%	increase
SBL	26	SbLow	SBL	855	SbLow, OCLow	SBL	3189%	significant increase, now includes OCL
OCL	-	OCLow						
SPM	2,321	SbMx1	SBM	1,109	SbMx1	SBM	-52%	decrease
	41,582			48,587			17%	overall increase

26

- 1 There have been significant (>50%) increases in AHA for BFM, PJD, POD, and SBL.
2 There have been significant (>50%) decreases in AHA for PJM, PRW and SBM.
3 Available harvest area for other forest units do not have a significant change from 2012
4 or the forest unit did not exist in 2012 (HRD). A meaningful rationale for these changes
5 is not possible as many factors have changed since the 2012-2022 FMP was prepared:
- 6 - Revised forest resources inventory, including significantly more (marginally)
7 productive shallow-soiled forest;
 - 8 - Revised forest unit definitions;
 - 9 - Objective indicators and associated desirable levels for these indicators have
10 been updated and refined since the 2012-2022 FMP, which also influences
11 the calculated LTMD AHA by forest unit. The BLG indicators
- 12
13 Preferred LTMD harvest areas by forest unit were further refined and balanced to be
14 planned harvest area prior to the Public Consultation Stage Three: Review of Proposed
15 Operations, after reserves associated with the Area of Concern (AOC) planning process
16 were confirmed (Section 4.2), with subsequent refinement of planned harvest areas
17 occurring for the draft plan (Section 4.3.1, Table FMP-12).

3.7.1.2 Available Harvest Volume

The projected Available Harvest Volume by species group for 2022-2032 is comprised of:

2,400,000	cubic metres of Spruce-Pine-Fir (SPF);
2,148,097	cubic metres of Poplar (PO);
295,691	cubic metres of White Birch (BW);
28,213	cubic metres of other species (Cedar, Larch, Other Hardwood, Black Ash, Red Pine, White Pine);
<u>4,872,001</u>	<u>cubic metres TOTAL volume.</u>

The projected harvest volume by major species group in the Proposed LTMD was compared to the historical (from 1991) and benchmark levels identified the Ontario Forest Accord Advisory Board (OFAAB) report. Major species groups are Spruce-Pine-Fir, Poplar and White Birch. Volume information is also portrayed for TOTAL of all species. Red Pine-White Pine volume is incidental and not considered a major species group on the Kenora Forest. The historical and projected harvest volumes by major species group are illustrated in Figure 30 to Figure 33.

A comparison to current industrial demand and Forest Accord (OFAAB) benchmark levels is also provided for each species group. Volumes are illustrated for the 100-year 2022-2122 period however the trends continue at similar levels through to the end of the strategic modeling horizon of 2172 for each species group.

The annual total harvest volume level in the LTMD for the 2022-2032 Kenora FMP (487,200 cubic metres) is 10% higher than the harvest volumes projected in the selected management alternative for the 2012-2022 FMP (443,500 cubic metres). The increased harvest volume corresponds to the increase in harvest area discussed above. The increase in harvest area and volume is a result of desired forest and benefits included in management objective indicators while balancing other socio-economic indicators and forest sustainability that are consistent with strategic direction from the 2012-2022 FMP. The Planning Team carefully considered the impact of the 2022-2032 projected harvest area on long-term harvest area/volume and future desired forest and benefits. The Planning Team supports this balance of long-term objective achievement.

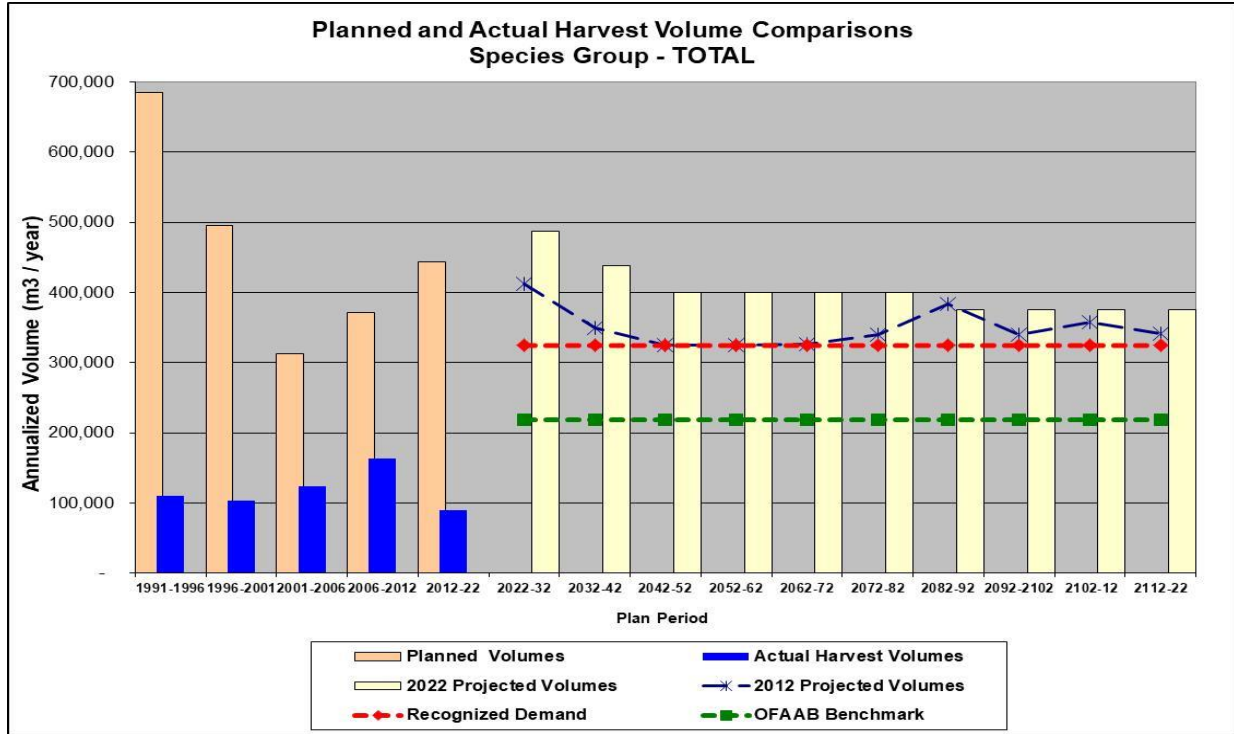
Current industrial demand levels are projected to be achieved for all major species groups. Projections for TOTAL volume and SPF volume are projected to be higher than the OFAAB benchmark levels through to 2122. Poplar volumes are projected to be higher than OFAAB benchmark levels for 30 years, after which time Poplar volume is projected to be at or lower than OFAAB volumes.

1
2 Associated with the available harvest volumes are additional potential volumes of defect
3 volume (branches, twigs, leaves, bark) and undersize volumes (top wood). As reported
4 in Table FMP-9, an estimated 247,900 m³ of defect volume and 93,600 m³ of
5 undersized volume per year are potentially available through harvest of the full available
6 harvest area for this 10-year plan period. The total of net merchantable available
7 harvest volume, defect and undersized volume is estimated to be 8,287,950 m³ for this
8 10-year plan period 2022-2032 (total 828,795 m³ per year for all three volumes types).

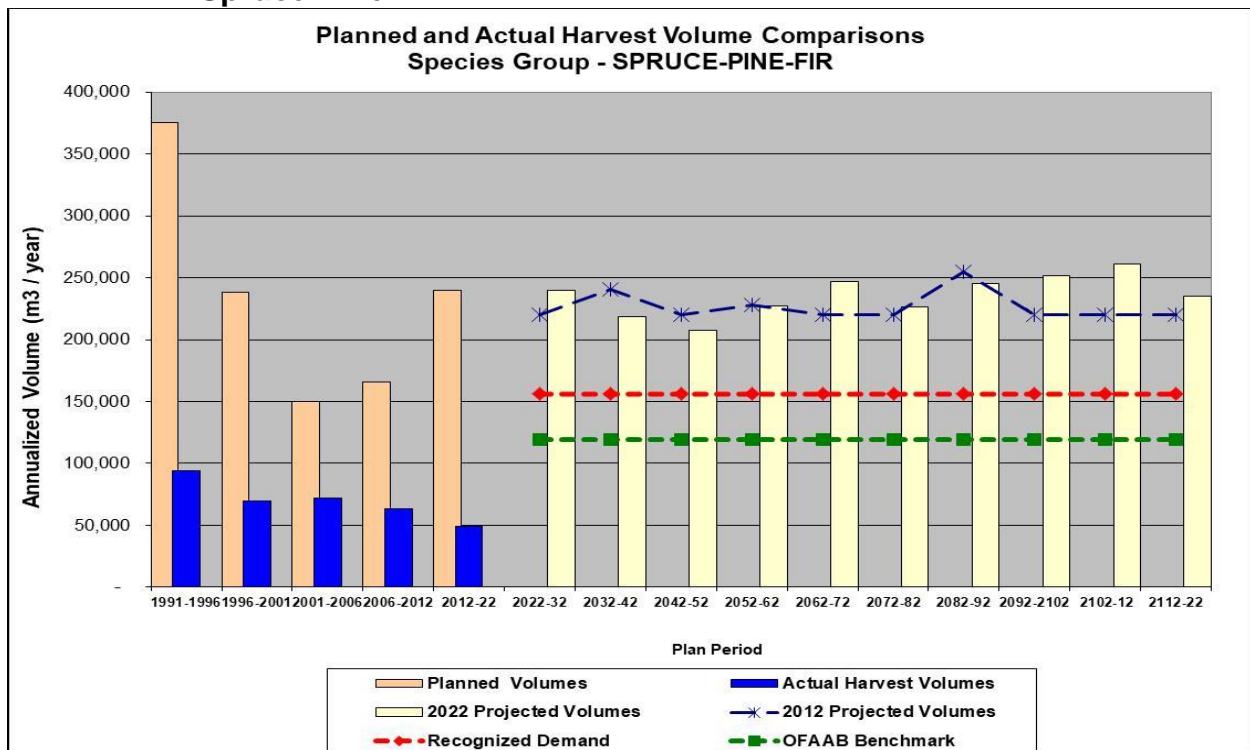
9
10 Broad Size Group - The projected Available Harvest Volume By Species Group and
11 Broad Size Group is documented in Table FMP-9 (projected harvest volumes over a
12 100-year planning horizon). The estimate of harvest volume by small and large product
13 size through time was calculated in the SFMM model. 20 cm diameter-sized trees were
14 identified by the Planning Team and Miisun staff as being an important indicator for
15 operational productivity. Small product was an estimate of volume from trees <20 cm
16 diameter at breast height; Large product was an estimate of volume from trees >=20 cm
17 diameter at breast height. See Supp. Doc. B – Analysis Package, Section 6.2.2.5 for
18 further details on the estimation of volume by broad product size.

19
20 The projection of harvest volumes by broad size group is a new requirement in the
21 FMPM 2020. This estimate is useful in strategic planning to quantify if projected forest
22 management activities will maintain a similar proportion of small and large volumes
23 through time, or if management activities will lead to change relative to the current
24 proportions. Volumes reported in Table FMP-9 support that the broad size groups of
25 harvest volume will remain relatively constant by volume species group for the next 100
26 years. It is estimated that approx. 5-9% of volume in all major species groups will be
27 available as large sized diameter volume. The proportion of large sized volume is
28 expected to remain relatively constant throughout the next 100 years.

1 **Figure 30 Planned and Actual Harvest Volume Comparisons, Species Group –**
2 **Total**



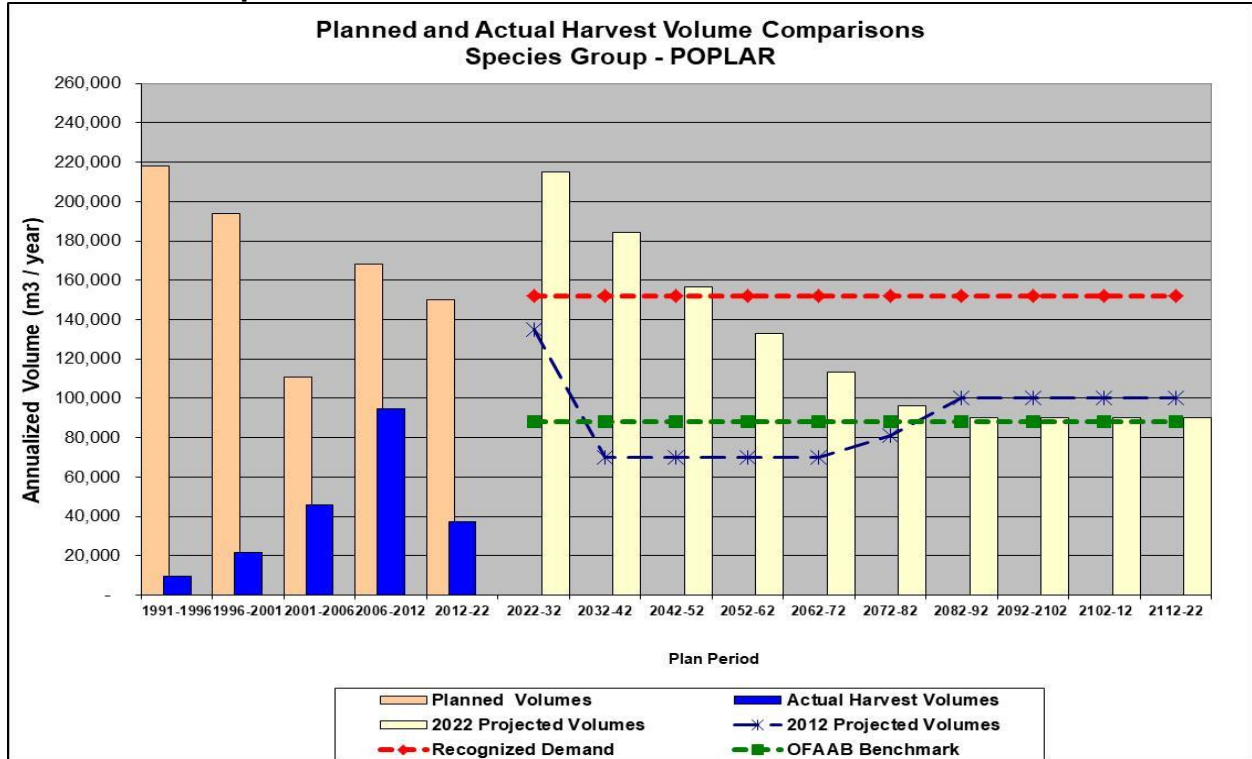
3
4 **Figure 31 Planned and Actual Harvest Volume Comparisons, Species Group –**
5 **Spruce-Pine-Fir**
6



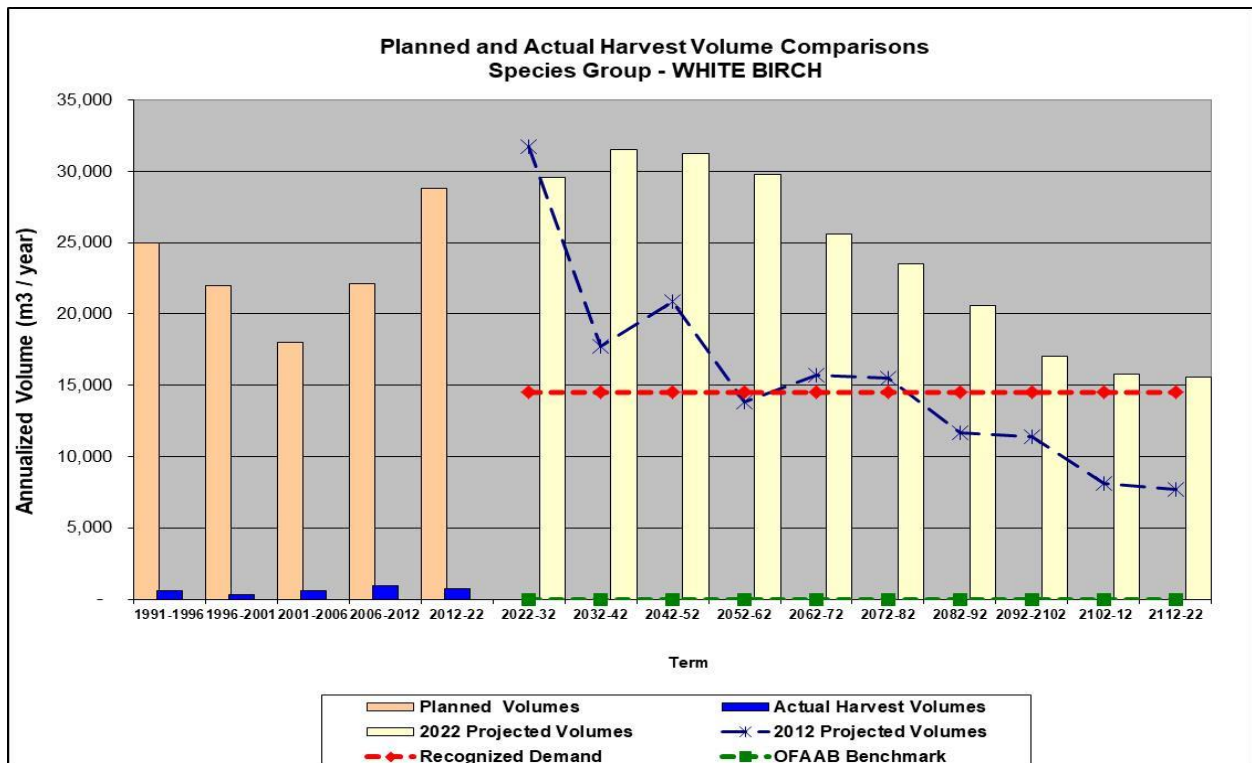
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8



1 **Figure 32 Planned and Actual Harvest Volume Comparisons, Species Group –**
2 **Poplar**



3 **Figure 33 Planned and Actual Harvest Volume Comparisons, Species Group –**
4 **White Birch**
5
6



7



3.7.1.3 Spatial Distribution of Harvest

The spatial distribution of harvest over the first four FMP periods (i.e. for 40 years from 2022-2062) was projected in the LTMD. Operational zones that include 75% or more of the projected harvest area over the next 40-years are graphically portrayed (Figure 34) and map MU644_2022_FMP_MAP_DistHarv_00.pdf. Lesser areas of additional harvest are projected in other operational zones.

During the SFMM strategic modelling process, certain spatial considerations were built directly into the model to reflect harvest area feasibility and accessibility through strategic and operational management zones. Projected harvest areas for the 2022-2062 plan period adhere to the Dynamic Caribou Habitat Schedule timing for current and future caribou habitat management in the caribou zone, consistent with inputs for SFMM strategic modelling (Supplementary Documentation B – Analysis Package, Section 6.2.5.5 Sub-Unit Harvest and Renewal Operability Timing, and Appendix 1 Caribou Habitat Analyses).

This spatial distribution of harvest areas contributes to short-term and long-term management objective achievement (as discussed in Section 3.7.3) and adheres to the management considerations included in the SFMM LTMD scenario (LTMD-07). The 40-year projection of harvest was considered by the Planning Team to be generally operationally feasible and economically feasible. Additional strategic and operational planning for the Red Lake Forest will be conducted prior to forest management plan approvals for the future FMP periods 2032-2062. Additional road construction will be required to access harvest areas in DCHS “B” and “C” blocks.

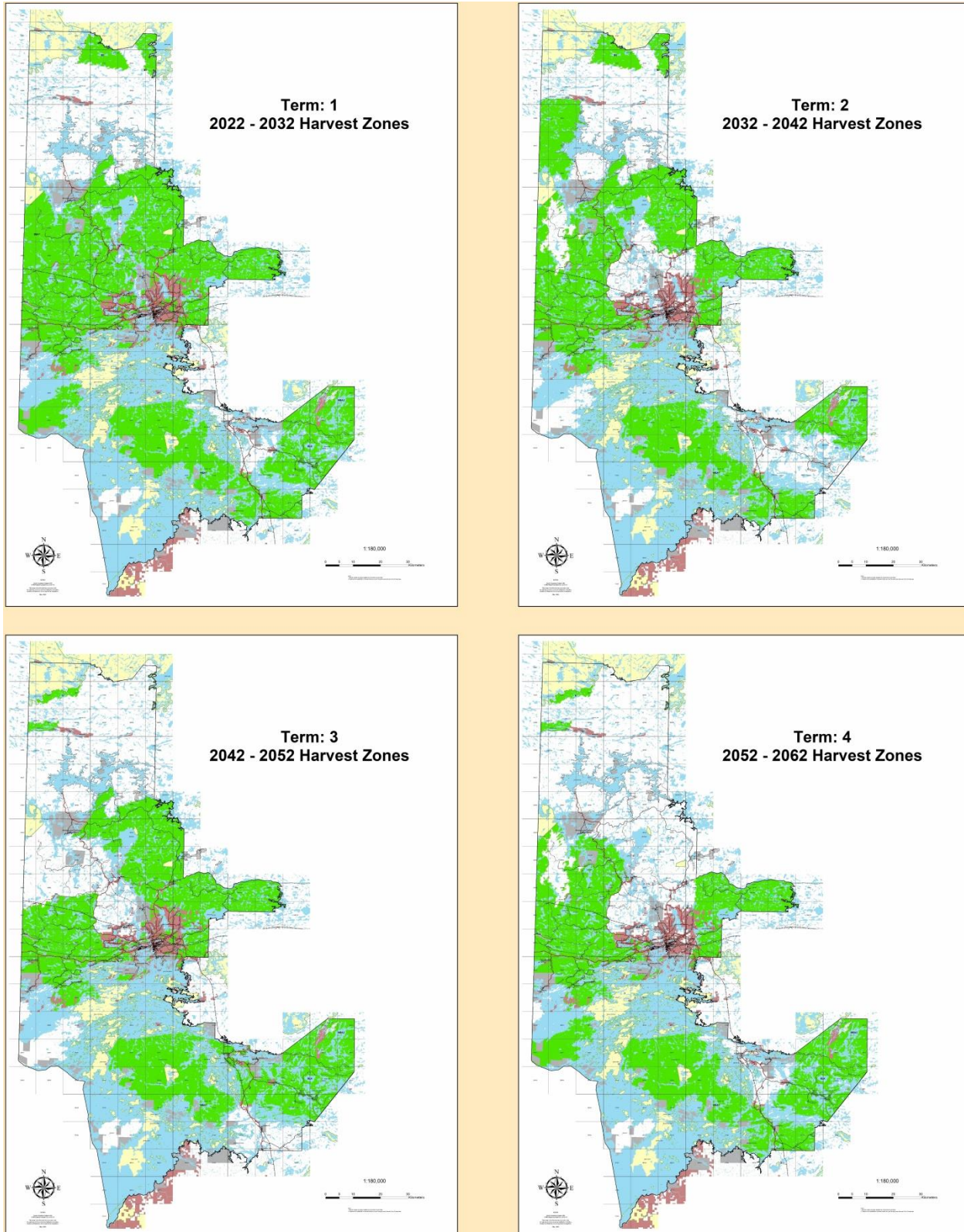
During development of the Long-term Management Direction, the projected Available Harvest Area for each 10-year period from 2022-2062 was:

<u>Available Harvest Area:</u>		<u>Total area per 10-year period:</u>
Proposed Harvest Years 1-10:	2022-2032	48,587 ha
Proposed Harvest Years 11-20:	2032-2042	43,367 ha
Proposed Harvest Years 21-30:	2042-2052	39,527 ha
Proposed Harvest Years 31-40:	2052-2062	39,985 ha

This spatial distribution of harvest areas contributes to short-term and long-term management objective achievement (as discussed in Section 3.7.3) and adheres to the DCHS timing and operational considerations included in the SFMM LTMD scenario (LTMD-07). The 40-year projection of harvest was considered by the Planning Team to be generally operationally feasible and economically feasible (see Section 3.7.4).

1 **FINAL PLAN NOTE:** After the 40-year available harvest area was projected for Stage
2 Two: Public Review of LTMD, in accordance with the FMP process, preferred harvest
3 areas for 2022-2032 (first 10-year period of the projected 40-year harvest areas) were
4 revised to be planned harvest area for Stage Three (Proposed Operations) and Stage
5 Four (Draft Plan). Planned harvest areas included changes for revised area of concern
6 planning, changes to address consultation or operational adjustments, and other minor
7 changes to balance allocations by forest unit. The 40-years of projected harvest was
8 not revised for Stages 3-4 as the minor revisions continued to be consistent with the
9 Stage 2 LTMD strategic projections.

1 **Figure 34 Projected Distribution of 40 Year Harvest Zones 2022-2062**
2



3

3.7.2 Selection of Areas for Harvest

During the selection of eligible areas for planned harvest operations, the Planning Team considered the application of NDMNRF's forest management guides. The LTMD was developed using the Strategic Forest Management Model (SFMM) that provided the projected Available Harvest Area areas within an acceptable balance of objective achievements (Section 3.7.3 to 3.7.7). Before the LTMD was supported or received preliminary endorsement by NDMNRF for use in this FMP, 10-year LTMD harvest areas were strategically selected and called "preferred harvest areas". Later during operational planning, preferred harvest areas were further refined to determine the "planned harvest areas". Details on the selection of planned harvest areas are documented in Section 4.3.1.1 Operational Considerations for Specific Harvest Operating Areas.

The following highlights the strategic consideration of the main forest management guides that occurred during the selection of preferred harvest areas for the LTMD. Other provincial guides were also considered and are discussed in Section 4.2 in relation to operational planning.

Forest Management Guide for Boreal Landscapes (BLG):

- SFMM projected LTMD Available Harvest Area was used to guide selection of preferred harvest areas since the LTMD AHA provided a balance of favourable achievement of BLG and socio-economic indicators.
- In particular, a Dynamic Caribou Habitat Schedule (mosaic of large landscape patches) to balance caribou habitat and available harvest area through time were spatially identified in the strategic modelling, and the timing of eligibility for harvest of each DCHS block was explicitly managed over the planning horizon in the strategic modelling.

Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales (SSG):

- SFMM strategic modelling and selection of preferred harvest areas considered certain SSG considerations (e.g. estimated riparian reserve area, volume net-down for wildlife trees).
- The SSG prescriptions for riparian areas were considered in the strategic modelling land base. These areas were considered as estimated reserve, with the understanding that planned harvest could still be operationally allocated in the FMP in some of the riparian areas in accordance with SSG guidelines.

- 1 • Four Moose Emphasis Areas, one Deer Emphasis Area, and one Elk Area
2 were identified and considered as separate subunits in the strategic
3 modelling. Preferred harvest area was refined to move towards the
4 prescribed balance of moose habitat in MEAs.
- 5 • Detailed consideration for SSG prescriptions was undertaken during
6 operational planning for proposed operations in the FMP (Section 4.2).

7
8 Additional strategic constraints were included in the modelling for LTMD not to directly
9 adhere to required forest management guides, but rather to bring some elements of
10 operational reality into the LTMD. Operational constraints added included optional
11 deferrals for harvest for one or more 10-year periods (also included by turning subunits
12 off from eligibility for certain terms). It is noted that selection of planned harvest or
13 planned road construction in these areas was still valid if verified as operationally
14 feasible by the SFL, and without negatively impacting overall objective achievement.

15
16 There were no unresolved issues over forest resource use or habitat for Species At Risk
17 that were needed to be considered in the development of the LTMD, nor did they limit
18 the strategic achievement of forest management objectives (see Section 3.7.3 for
19 Assessment of Objective Achievement). Consideration for the protection of habitat for
20 Species At Risk occurred during strategic planning (specifically for caribou habitat) and
21 also during operational planning (see Section 4.2). After preliminary NDMNRF-
22 endorsement of the LTMD, during the operational planning stage or draft plan stage,
23 public comments resulted in the development of certain new AOCs with reserve area
24 and/or areas of modified operations. Forest operations or road corridors were adjusted
25 spatially (reserves, road corridors) or through conditions on operations in the AOC
26 (modified zone), to address these AOCs (Sections 4.2, 4.3 and 4.5).

27
28 Harvest eligibility criteria were incorporated into the strategic SFMM modelling.
29 Additional selection criteria are considered by the forest manager to further refine and
30 determine planned harvest from the eligible areas. All planned harvest areas will
31 contribute to greater or lesser degrees to overall objective achievement, including
32 landscape pattern, during the 10-year period of the FMP and the long-term modelling
33 horizon. The following further describes the harvest area eligibility and selection criteria
34 considerations.

1 Eligibility Criteria

2
3 The Long-Term Management Direction provides the strategic, long-term direction for
4 management of the Kenora Forest. In order for the LTMD to be successfully
5 implemented, areas eligible for harvest, renewal and tending operations during the 10-
6 year period of the plan are identified.

7
8 For this forest management plan, areas eligible for harvest operations during the 10-
9 year period must meet the following eligibility criteria:

- 10
11 a) The first, and most important criterion is that the area must be managed, Crown land
12 ownership;
13 b) While the possibility of harvest is somewhat unlikely, all shoreline reserves and
14 areas previously bypassed are considered eligible for harvest;
15 c) The third criterion was to ensure harvest allocations were selected from areas
16 eligible for harvest within this 10-year period (Period 1). This includes adherence to
17 harvest timing of DCHS blocks open for harvest from 2022-2032, identified as B1
18 and B2 Blocks.

19 **FINAL PLAN NOTE:** For the final FMP, eligibility of harvest areas from the
20 DCHS were deleted due to Fire KEN51 burning the majority of mature forest in the
21 caribou zone. See Section 4.3.1 for confirmation of no planned harvest in the
22 caribou zone for this 2022-2032 FMP.

- 23
24 d) Within the plan period, all eligible areas should be at or above the lower average age
25 requirement by forest unit (PLANFU) and forest productivity class (YIELD) (Table
26 28).

27 Note Forest Productivity Class (YIELD) Definitions and Codes:

28 NAT = Stands originating from natural disturbances, not recorded as being
29 harvested

30 LOW = Managed, low productivity stands

31 MED = Managed, moderate productivity stands

32 HIGH = Managed, higher productivity stands

33
34
35 These minimum average operability ranges were included in the base model and
36 were consistent throughout the strategic modelling analyses that involved harvest
37 operations. The average minimal volume yield to be considered operational is
38 approximately 65-80 cubic metres per hectare. No upper operational limits were
39 included in strategic modelling (all were “infinite”).
40

1 **Table 28 Lower Average Harvest Operability Limits by Forest Unit and YIELD**
 2

YIELD:		NAT		LOW		MED		HIGH	
Forest Unit	Analysis Unit	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
BFM	all	60	inf			55	inf		
CMX	all	65	inf	80	inf	65	inf		
HMX	all	55	inf			55	inf		
HRD	all	60	inf			55	inf		
PJD	PJDD	55	inf	65	inf	50	inf	45	inf
	PJDS	65	inf	65	inf	50	inf	45	inf
PJM	all	65	inf	80	inf	55	inf		
POD	all	55	inf			65	inf	55	inf
PRW	all	85	inf	85	inf	85	inf	60	inf
SBD	all	85	inf			80	inf		
SBL	all	100	inf	100	inf				
SBM	all	75	inf			85	inf	65	inf

3
4
5 Younger stands are considered eligible for harvest where they are spatially
6 associated with older stands and their harvest at the same time as the rest of the
7 area is beneficial for landscape pattern or operational reasons (harvest, road
8 access, renewal timing or consideration for other forest uses); or

9
10 e) All areas in which timber has been damaged by blowdown, insects, or disease.

11
12 As part of the eligibility map, all blocks not yet harvested during the 2012-2022 FMP are
13 identified as eligible harvest area. The preferred harvest areas will be update during
14 plan production in a timely fashion as 2012 FMP planned blocks are harvested. It is
15 expected that the number of blocks remaining from the 2012 plan will decrease by April
16 2022.

17
18 Preferred and Optional Harvest Area Selection Criteria

19
20 The areas for harvest operations were selected from within the areas that passed
21 through the eligibility criteria filter. The stands deemed eligible had to meet specific
22 stand characteristics. The application of this set of selection criteria aided the
23 application of sustainable forest management and enhanced plan continuity from the
24 previous plan period to the current plan period. It is important to recognize that the
25 following selection criteria were applied after the potential harvest stands met the
26 eligibility criteria based on harvest timing according to harvest, wildlife habitat or
27 landscape pattern deferrals.
28

- 1 The following are the selection criteria that were used to direct the harvest allocation
2 from within the eligible areas. The order that these criterion are presented, represent a
3 general ranking of importance.
4
- 5 a) Allocate areas that will be reasonably accessed within the plan period;
 - 6 b) Allocate the full available harvest area for each forest unit as projected by in the
7 LTMD. Allocations must not exceed the available harvest area by forest unit for the
8 10-year period;
 - 9 c) Allocate in accordance with negotiated Resource Stewardship Agreement terms or
10 prescriptions;
 - 11 d) Allocations will be planned to consider the demands of different stakeholders,
12 including Indigenous communities, tourism, trapping, mining, outdoor enthusiasts
13 and the public;
 - 14 e) Manage wildlife habitat needs through avoiding known sensitive areas that require
15 protection or create disturbances that support enhancement of wildlife habitat;
 - 16 f) Stand age should meet lower minimum average operability criteria by forest unit and
17 forest productivity class during the 10-year period (eligibility criteria). Some variance
18 is warranted where the intent is to defragment an area;
 - 19 g) Allocate harvest areas utilizing geographical boundaries such as streams, lakes,
20 non-productive areas, topography and stand boundaries to define the boundaries of
21 the harvest area;
 - 22 h) Within the designated Moose Emphasis Area, allocate harvest areas that show
23 movement towards meeting moose habitat management objectives.
 - 24 i) Allocations must be sensitive to the needs of the forest industry:
 - 25 • Areas must meet the forest industry product, volume and delivery requirements.
26 Mill yard inventories require year-round delivery of specified species;
 - 27 • Create a balance of summer and winter wood to provide continuous year round
28 harvest opportunities, and volume and delivery requirements of destination mills;
 - 29 • Areas must constitute an economical harvest opportunity (min. operability limits);
 - 30 • Areas appropriate to meet the planned volume needs of specific harvesting
31 operators;
 - 32 • Areas must facilitate on time delivery of the wood (just in time deliveries); and
 - 33 • Haul distances must be balanced in an attempt to control fibre costs. The
34 harvest blocks must be made accessible with a road construction and
35 maintenance program that will be balanced annually.
 - 36 j) Allocations must consider the Minister signed Volume Agreements (commitments)
37 applied to the Kenora Forest;
 - 38 k) Allocate areas to meet the anticipated needs of overlapping licensees; Allocate
39 areas for potential fuelwood opportunities (to be identified in Annual Work
40 Schedules);
 - 41 l) Attempt to reasonably balance harvest area scheduling throughout the 10-year
42 period; and

1 m) Allocate areas of natural disturbance for salvage harvest operations, where feasible.

2

3 The balancing of these selection criteria does not always follow the same order
4 depending on location, access, RSAs, forest unit and age classes. Again, while making
5 allocations, the relative proportion of winter and summer wood was considered
6 important, as well as road access and planned harvest patch sizes.

7

8 Planned harvest areas are closely matched to the projections of forest operations in the
9 LTMD. All eligible areas that were not identified as preferred areas for harvest were
10 considered to be optional harvest areas.

11

12 There was no direct input from the public and/or Indigenous communities that
13 influenced the selection of areas for preferred LTMD harvest. Public and/or Indigenous
14 community comments received later in the planning process during Stage 3 (Proposed
15 Operations) and Stage 4 (Draft Plan) that influenced selection of harvest area are
16 described in Section 4.3.1.1.

17

18 The planned harvest areas for the 10-year period and the optional harvest areas are
19 discussed in Section 4.3.1 and Area of Concern planning described in Section 4.2. The
20 planned harvest areas are displayed on the FMP map
21 MU644_2022_FMP_MAP_Index_00.pdf. The optional harvest areas are identified as
22 all the other harvest eligible area as described above (depicted during LTMD
23 development on MU644_2022_LTMD_MAP_Sum01.pdf). During selection of areas for
24 planned harvest operations, NDMNRF's forest management guide(s) were considered
25 as well as any discussions related to Resource Stewardship Agreements. Planned
26 harvest areas will contribute to the achievement of management objectives, including
27 indicators of landscape pattern, as discussed in Section 3.7.3.

28

29 The selection criteria for contingency areas are:

30 a) Maximum of two years total available harvest area to be allocated as contingency
31 area;

32 b) Areas must be accessed or expected to be accessed in a reasonable timeframe;
33 and

34 c) Areas must be able to be harvested year-round.

35

36 Contingency areas have been identified from the optional harvest areas and have
37 received detailed area of concern planning (Section 4.3.8).

3.7.3 Assessment of Objective Achievement

FINAL PLAN NOTE: Achievement reflects assessment of LTMD. Where achievement is varied for final plan (primarily due to changed Plan Start 2022 land base after 2021 wildfires), a reference is included to where in the plan text the revised objective achievement discussion is located.

The achievement of individual management objectives was assessed for acceptability to the Planning Team using the results of the SFMM forest modelling for the LTMD, the results of the preliminary spatial assessment using Ontario's Landscape Tool and other plan components developed during preparation of the plan.

A summary of the projected objective achievement assessment, desirable levels and targets in the LTMD are included in Table FMP-10. The methods for assessment of objective indicator achievement were referenced in Section 3.6.2. Of the 30 indicators included in Table FMP-10, 18 of the indicators can be assessed in the FMP. The remaining 12 indicators (and reassessment of 10 of the original 18 indicators) will be assessed in the future, after plan implementation as appropriate (specific indicator timing of assessment is noted in Table FMP-10).

Assessed During Plan Preparation (16 indicators): (listed by plan management objective number, and number of indicators assessed for objective achievement)

1. Caribou Habitat (4 indicators);
2. Forest Composition (5 indicators);
3. Landscape Pattern (2 indicators);
4. Moose Habitat (2 indicators); and
6. Wood Supply (3 indicators).

Assessed at Draft Plan Stage (2 indicators):

7. Indigenous Engagement (1 indicator);
8. Local Citizens' Committee Engagement (1 indicator).

Assessed After Plan Implementation (12 indicators):

1. Caribou Habitat (2 indicators);
5. Forest Access (1 indicator);
6. Wood Supply (3 indicators);
9. Forest Renewal (3 indicators);
10. Forest Values (1 indicator); and
11. Healthy Ecosystems (2 indicators).

The objective achievement assessment was based on the extent to which the established desirable or target levels for each indicator have been satisfied. All of the indicators are assessed as having:

- 1 (a) ACHIEVED the desirable level or movement towards desirable level through
2 meeting the target level,
3 (b) PARTIALLY ACHIEVED with achievement of, or movement towards, target
4 levels;
5 (c) NOT ACHIEVED desirable or target levels, or
6 (d) FUTURE assessment will occur after plan implementation.
7

8 The following is a discussion of the desirable and target level achievement assessments
9 for each indicator, with a summary of assessment and relevant detail provided.
10

11 **3.7.3.1 Objective 1: Caribou Habitat**

12 **Indicator 1a: Caribou Habitat Area**

13 **Assessment:** **PARTIALLY ACHIEVED.** The desirable level is to maintain caribou
14 refuge habitat and winter combined habitat within their interquartile hectare ranges
15 (IQR) of the Simulated Range of Natural Variation (SRNV) as recorded in Ontario's
16 Landscape Tool for the Kenora Forest.
17

- 18 • Caribou refuge habitat is above desirable range at Plan Start, and is
19 projected to remain above the IQR for the entire 160-year planning
20 horizon (to 2182) (see table below).
- 21 • Caribou winter combined (preferred and useable) habitat is within the
22 desirable range at Plan Start, and increases above the IQR in 20 years.
23 The projected winter combined habitat exceeds the IQR from 2042-2182.
- 24 • While more refuge and winter combined habitats are very good
25 achievement for this indicator, because projected areas remains above
26 the IQRs, assessment is considered to be "Partial" and must be managed
27 in the context of balanced achievement of other management objectives.
28

29 **FINAL PLAN NOTE:**

- 30 - See Section 2.1.3.3.4 for discussion of caribou habitat as classified in the revised
31 Plan Start 2022 land base (decreased amount of caribou refuge and winter
32 habitats at 2022).
- 33 - See Section 4.9.6 for revised assessment of objective achievement. (Final)
34 **PARTIALLY ACHIEVED** – Similar achievement as LTMD. Both caribou refuge
35 and winter habitats are below desirable levels for 40 years, then both habitat types
36 increase above the IQRs after 40 years.
37

1 **Table 29** **Projected Caribou Habitat Area**
 2

(1a) Caribou Habitat in the Caribou Zone (Ha):		
10-year Period (Start)	Refuge	Winter Combined
2022	71,994	29,678
2032	72,246	62,576
2042	70,061	60,218
2052	70,379	59,854
2062	73,525	59,823
2072	72,140	55,137
2082	74,354	58,541
2092	74,544	59,066
2102	73,705	52,656
2112	74,841	56,290
2122	74,732	54,570
2132	71,550	49,338
2142	72,324	54,457
2152	72,500	56,434
2162	72,900	57,599
2172	75,748	61,694
2182	73,832	57,543
BLG Desirable Upper	61,458	45,161
BLG Desirable Lower	54,045	18,667
under min.	within desirable level range	above desirable range

3
 4
 5
 6



1 **Indicator 1b: Texture of Caribou Winter Habitat**

2 **Assessment: ACHIEVED.** The desirable level is to have the landscape pattern move
3 towards percentage projections for caribou winter combined habitat (mean by
4 concentration class) as recorded in OLT, focusing on 60% and greater concentration
5 classes.

- 6 • Texture of caribou winter habitat is below the mean desirable level for
7 >60% concentrations classes at Plan Start 2022 (Table 30).
- 8 • The desirable level is overachieved with significant movement towards,
9 then above, the mean proportion of 61-100% concentrations at both
10 assessment scales by Plan End 2032 with preferred LTMD harvest.
- 11 • Limited harvest in the caribou zone in this 2022-2032 plan period results in
12 forest aging into higher concentrations of coarse texture caribou winter
13 habitat. Target level is achieved.

14 **FINAL PLAN NOTE:**

- 15 - See Section 2.1.3.3.4 for discussion of texture of caribou winter habitat as
16 classified in the revised Plan Start 2022 land base.
 - 17 - See Section 4.9.6 for revised assessment of objective achievement.
- 18 (Final) **NOT ACHIEVED** – Due to Fire KEN51, the texture of caribou winter habitat
19 is poor at Plan Start 2022. Through aging of the caribou zone by only 10 years to
20 Plan End 2032, the texture of caribou winter habitat does not appreciably change.
21 Improvement is expected in 40 years when young forest becomes useable winter
22 habitat and the texture of winter habitat improves.

23
24
25 **Table 30 Assessment of Caribou Winter Habitat Texture 2022-2032**

26

Analysis Scale and Concentration Class	Plan Start 2022	Mean Desirable Level	Plan End 2032 with LTMD Harvest
60 km ² Hexagon Scale:			
.01 - .20	38%	17%	0%
.21 - .40	20%	17%	3%
.41 - .60	24%	22%	10%
.61 - .80	17%	30%	45%
> .80	1%	15%	42%
300 km ² Hexagon Scale:			
.01 - .20	5%	8%	0%
.21 - .40	66%	22%	0%
.41 - .60	30%	32%	0%
.61 - .80	0%	34%	68%
> .80	0%	6%	32%

27
28

1 **Indicator 1c: Texture of Caribou Refuge Habitat**

2 **Assessment: ACHIEVED.** The desirable level is to have the landscape pattern move
3 towards percentage projections for caribou refuge habitat (mean by concentration class)
4 as recorded in OLT, focusing on 60% and greater concentration classes.

- 5 • Caribou refuge texture is projected to remain the same (300 km² scale) or
6 to increase above the desirable levels (60 km² scale) during this plan
7 period 2022-2032 (Table 31).
- 8 • Target level is achieved with increase coarse texture for caribou refuge
9 habitat (very good for caribou).
- 10 • With new forest access and increased harvest levels in the future,
11 achievement of desirable level is projected for the mid- to long-term.

12
13 **FINAL PLAN NOTE:**

- 14 - See Section 2.1.3.3.4 for discussion of texture of caribou refuge habitat as
15 classified in the revised Plan Start 2022 land base.
- 16 - See Section 4.9.6 for revised assessment of objective achievement.
17 (Final) **NOT ACHIEVED** – Due to Fire KEN51, the texture of caribou refuge habitat
18 was reduced at Plan Start 2022. Through aging of the caribou zone by only 10
19 years to Plan End 2032 and no forest management activities, the texture of caribou
20 refuge habitat does not appreciably change. Improvement is expected in 40 years
21 when more young forest becomes suitable refuge habitat.

22
23 **Table 31 Assessment of Caribou Refuge Habitat Texture 2022-2032**

24

Analysis Scale and Concentration Class	Plan Start 2022	Mean Desirable Level	Plan End 2032 with LTMD Harvest
60 km ² Hexagon Scale:			
.01 - .20	0%	0%	0%
.21 - .40	0%	2%	0%
.41 - .60	0%	12%	3%
.61 - .80	17%	34%	18%
> .80	83%	53%	79%
300 km ² Hexagon Scale:			
.01 - .20	0%	0%	0%
.21 - .40	0%	0%	0%
.41 - .60	0%	8%	0%
.61 - .80	0%	43%	0%
> .80	100%	49%	100%

25
26
27

1 **Indicator 1e: On-line Caribou DCHS (%)**2 **Assessment:** **ACHIEVED** through long-term.

- 3 • On-line caribou habitat through time was considered when developing
- 4 geographic delineation and operability timing of DCHS subunits.
- 5 • Plan Start 28% is below desirable range ($\geq 40\%$ based on Caribou
- 6 Insurance Policy from Caribou Conservation Plan) due to current age
- 7 class structure of the caribou zone forested area.
- 8 • Desirable level is achieved 2032 onwards, once large 1983 fire ages into
- 9 being online. Target level is achieved.
- 10 • Online DCHS:
 - 11 ○ 2032 – 76%
 - 12 ○ 2042 – 70%
 - 13 ○ 2062 – 55%
 - 14 ○ 2082 – 59%
 - 15 ○ 2102 – 47%
 - 16 ○ 2122 – 47%

17
18 **FINAL PLAN NOTE:**

19 - See Section 4.9.6 for revised assessment of objective achievement.

20 (Final) **NOT ACHIEVED** – Due to Fire KEN51, online DCHS blocks are recalculated to
21 be 0% at Plan Start 2022. The DCHS will be re-evaluated for the next 2032 FMP, and
22 online habitat is not anticipated to improve significantly for the next 60 years as young
23 forest ages to be older than 60 years.

24

3.7.3.2 Objective 2: Forest Composition

Indicator 2a: Landscape Class Area

Assessment: PARTIALLY ACHIEVED. The desirable level is to maintain the mature and late (ML) successional landscape class areas within the interquartile hectare range Simulated Range of Natural Variation (SRNV) for each mature and late successional landscape as recorded in Ontario's Landscape Tool for the Kenora Forest. Strategic modelling was conducted with management constraints to direct the future forest condition towards indicator achievement. The SFMM projected productive forest area by landscape class from Plan Start (2022) through the long-term (2182) is reported in Table 32.

- ML upland conifer is within the desirable range at Plan Start 2022. The other three (3) classes are above desirable levels at Plan Start 2022.
- Long-term 100-year desirable levels are achieved for ML lowland conifer and ML upland conifer.
- ML balsam exceeds the IQR, and ML hardwood meets target level to decrease and move towards IQR by the end of the 160-year planning horizon.
- This overachievement was considered acceptable by the Planning Team to allow for balancing objectives related to wood supply and the distribution of mature and old growth forest.

Table 32 Projected Crown Productive Forest by Landscape Class

(2a) Area by Landscape Class (Productive ha)				
10-year Period (Start)	Mature and Late Successional:			
	Balsam	Conifer	Hardwood	Lowland
2022	18,070	208,260	141,825	38,522
2032	22,356	201,568	126,430	37,991
2042	27,940	188,104	118,297	37,116
2052	29,060	196,817	118,109	36,109
2062	30,212	241,764	111,148	38,122
2072	30,805	229,619	103,904	30,863
2082	31,579	216,531	96,103	28,795
2092	35,663	209,839	99,432	27,224
2102	40,052	214,809	98,332	26,112
2112	44,492	216,797	94,169	25,553
2122	48,155	220,884	87,103	24,737
2132	46,890	228,113	80,773	23,899
2142	42,291	233,647	76,129	29,319
2152	43,598	233,746	71,101	30,260
2162	44,702	233,323	67,447	31,486
2172	45,098	234,358	62,673	31,290
2182	45,379	241,715	56,588	24,937
BLG Desirable Upper	17,982	224,820	65,215	28,328
BLG Desirable Lower	12,782	152,976	43,706	23,354
	under min.	within desirable level range	above desirable range	

1 **Indicator 2b: Old Growth Forest Area**

2 **Assessment: ACHIEVED.** The desirable level is to maintain the amount of old growth
3 by regional old growth grouping within the interquartile hectare range (Simulated Range
4 of Natural Variation)(SRNV) as recorded in Ontario's Landscape Tool for the Kenora
5 Forest for all groupings, and "increase" the amount of old growth Red Pine – White Pine
6 (Table 33).

- 7
- 8 • All Old growth groups are below desirable levels at Plan Start 2022.
 - 9 • All old growth groups achieved desirable levels in the mid-term (within 10-30
10 years).
 - 11 • Overachievement of desirable levels from 2042 to 2112 was considered
12 acceptable as more old growth area provides additional wildlife habitat and
13 forest diversity benefits.
 - 14 • Overall, area projections for the Old Growth objective indicator is acceptable
15 to the Planning Team. Movement for Old Growth groups in this plan period
16 meets target levels.

17 **Table 33 Projected Crown Productive Forest by Old Growth Grouping**

18

(2b) Old Growth by Grouping (Productive forest ha)				
10-year Period (Start)	Lower Old Growth Age (Years):			
	Upland Conifer	Lowland Conifer	Hardwood/Mix	Red Pine-White Pine
2022	30,442	4,217	25,043	1,953
2032	64,587	7,543	65,495	3,325
2042	99,305	10,703	107,532	6,136
2052	106,354	14,954	107,129	8,532
2062	102,941	15,215	104,869	11,261
2072	102,002	14,463	96,365	13,404
2082	104,980	17,058	80,042	12,471
2092	132,777	17,614	65,720	12,248
2102	103,877	18,042	57,640	11,889
2112	84,770	17,135	56,724	12,058
2122	72,559	16,333	58,000	10,931
2132	57,511	13,841	58,000	10,671
2142	50,000	14,060	58,000	10,847
2152	51,423	16,127	58,000	10,990
2162	50,752	16,137	58,000	11,075
2172	50,000	15,222	58,000	11,734
2182	50,000	15,734	58,000	12,585
BLG Desirable Upper	79,383	17,281	78,344	increase
BLG Desirable Lower	47,362	12,236	55,649	1,969

19

20

under min. within desirable level range above desirable range

Indicator 2c: All Ages Red Pine and White Pine Forest Unit Area

Assessment: ACHIEVED. The desirable level is to increase the red pine and white pine area toward 39,135 ha on the Kenora Forest. Target level is to increase the red pine – white pine area in this plan period.

- Projected area assessed in strategic modelling with SFMM. Silvicultural strategy inputs were included in SFMM to ensure a projected increase in the area of all ages red pine – white pine (PRW forest unit).
- Through renewal planned for this 10-year period, PRW area is projected to increase by 613 ha, meeting the desirable and target levels.
- The all-ages red pine-white pine forest area is projected to be over 21,000 ha within 100 years (Table 34).
- Operational renewal strategies will continue 100+ years to ensure continued increase. Actual increase in area may be greater than was strategically modelled.
- It is expected that current red pine or white pine stands should continue to persist and increase in area through retention of red pine and white pine as wildlife trees, and through regeneration efforts to move towards the pre-industrial condition.

Table 34 Projected Crown Productive Forest – Three BLG Indicators

Indicator:	(2c)	(2d)	(2e)
10-year Period (Start)	Red Pine-White Pine	Upland Conifer	Young <36 yrs
2022	18,488	241,172	104,723
2032	19,101	245,886	97,545
2042	19,901	253,738	124,897
2052	20,150	263,799	142,869
2062	20,465	270,650	145,702
2072	20,849	276,657	142,984
2082	20,495	284,625	139,162
2092	20,646	290,712	136,484
2102	20,761	292,502	132,333
2112	21,035	294,820	129,740
2122	21,125	296,969	129,712
2132	21,303	302,308	129,712
2142	21,500	310,000	131,584
2152	21,953	311,188	131,666
2162	22,483	310,772	133,985
2172	23,068	310,000	136,493
2182	24,000	310,000	141,496
BLG Desirable Upper	39,135	343,729	227,291
BLG Desirable Lower	increase	290,514	129,712

under min. within desirable level range above desirable range



1 **FINAL PLAN NOTE:** All Ages Red Pine – White Pine Forest Unit Area – See Section
2 4.9.6 for revised objective achievement.
3 (Final) **NOT ACHIEVED** – While the Plan Start 2022 PRW forest unit area is maintained
4 for 40 years, it does not appreciably increase through time as desired. Reduced
5 harvest over the next 20 years, as a result of 2021 wildfires, limits the areas available to
6 be renewed to the PRW forest unit.

7
8 **Indicator 2d: Upland Jack Pine and Spruce Area**

9 **Assessment:** **ACHIEVED.** The desirable level is to increase the amount of upland pure
10 conifer to the interquartile hectare range Simulated Range of Natural Variation (SRNV)
11 as recorded in Ontario's Landscape Tool for the Kenora Forest.

- 12 • Upland Jack Pine and Spruce Area (PJD, PJM, SBD, SBM forest units) 2022
13 Plan Start level is approx. 49,000 ha below the lower desirable level (Table
14 34).
- 15 • Renewal transitions included pathways to regenerate upland pine and spruce
16 forest through planting and seeding treatments, and to a lesser degree,
17 natural regeneration. Strategic modelling included these renewal constraints
18 to ensure acceptable upland pine and spruce area projections in the future
19 forest condition.
- 20 • Target level to increase towards the IQR is achieved with steady movement
21 towards, and achieving the desirable level in 70 years. Controlling the
22 renewal rate at which certain forest types were converted to upland conifer
23 was essential to balancing other objectives within the modelling of the LTMD
24 and to reflect the operational renewal program expected to be implemented
25 on the Kenora Forest.

26
27 **Indicator 2e: Young Forest Area (<36 years old)**

28 **Assessment:** **ACHIEVED.** The desirable level is to maintain the amount of young
29 forest (all forest units) in the interquartile hectare range Simulated Range of Natural
30 Variation (SRNV) as recorded in Ontario's Landscape Tool for the Kenora Forest.

- 31 • Due to limited under harvest and limited wildfires on the Kenora Forest for the
32 past 30 years, Young Forest is below the desirable level at Plan Start (Table
33 34). **FINAL PLAN NOTE:** 2021 fires have increased/improved Plan Start
34 2022 Young Forest area to within desirable level (**ACHIEVED** for next 160
35 years).
- 36 • Strategic modelling included constraints to ensure acceptable amount of
37 young forest in the future forest condition. Available harvest levels in SFMM
38 contribute to an increase in projected young forest area (harvest and renewal
39 creates young forest).
- 40 • The desirable level and target level are projected to be achieved in 30 years
41 and then maintained throughout 160-year strategic planning horizon.

3.7.3.3 Objective 3: Landscape Pattern

Indicator 3a: Texture of Mature and Old Forest by Concentration Class

Assessment: **ACHIEVED.** The desirable level is to have the landscape pattern consistent with percentage concentration projections for mature/old forest by concentration class as established for the forest as recorded in OLT, with a focus on the concentration classes >60%.

- This indicator is measured at Plan Start (2022) and at Plan End (2032) with OLT to assess the impact on landscape pattern of harvesting the preferred LTMD harvest allocations (Table 35). LTMD preferred harvest allocations were not confirmed until the secondary OLT analysis was completed.
- Mature and Old Forest amount and texture is above the desirable level at Plan Start, and is projected to decrease only 1% during this plan period. Target level is achieved.
- Strategies are being implemented to defragment certain areas and also to plan harvest areas in patches of currently mature/old forest. Results of the defragmentation strategy are evident in the short-term with the reduction of the proportion of the 21-60% classes on the Kenora Forest.
- Movement towards the mean concentrations in future FMPs is expected to improve.

Table 35 Assessment of Mature and Old Forest Texture 2022-2032

Analysis Scale and Concentration Class	Plan Start 2022	Mean Desirable Level	Plan End 2032 with LTMD Harvest
500 ha Hexagon Scale:			
.01 - .20	12%	40%	11%
.21 - .40	10%	13%	9%
.41 - .60	18%	10%	21%
.61 - .80	20%	10%	23%
> .80	38%	28%	34%
5,000 ha Hexagon Scale:			
.01 - .20	10%	28%	10%
.21 - .40	9%	23%	7%
.41 - .60	21%	20%	25%
.61 - .80	30%	17%	34%
> .80	29%	12%	24%

1 **Indicator 3b: Young Forest Patch Size** (Frequency Distribution by Size Class)

2 **Assessment:** **NOT ACHIEVED.** The desirable level is to have the young forest
3 landscape pattern consistent with projections of mean frequency by size class
4 calculated for the forest as recorded in OLT.

- 5 • This indicator was measured at Plan Start (2022) and at Plan End (2032) with
6 OLT to assess the impact on landscape pattern of young forest of harvesting
7 the preferred LTMD harvest allocations (Table 36).
- 8 • Overall 2032 young forest pattern by size class through implementation of
9 planned activities in this FMP generally approximates the Plan Start
10 frequency.
- 11 • Frequency of small patches of young forest are projected to increase 1%
12 (away from mean, desirable level) on the Kenora Forest during the 10-year
13 period. The indicator is the only indicator assessed as Not Achieved.
- 14 • Disturbances >10,000 ha are mostly influenced by natural disturbances
15 Desirable and target levels are not expected to be achieved until the long-
16 term with implementation of harvest to defragment the forest and create
17 more, larger young forest over many planning periods.

18
19 **Table 36 Assessment of Young Forest Patch Size Frequency 2022-2032**

20

Young Forest Patch Size Classes (ha)	Plan Start 2022	Mean Desirable Level	Plan End 2032 with LTMD Harvest
< 100	67%	61%	68%
101-250	22%	16%	23%
251-500	6%	8%	6%
501-1,000	4%	6%	3%
1,001-2,500	0%	5%	0%
2,501-5,000	1%	2%	0%
5001-10,000	0%	1%	0%
10,001-20,000	0%	1%	0%
>20,000	0%	0%	0%

21
22

3.7.3.4 Objective 4: Moose Habitat

Indicator 4a: Moose Habitat Proportion by Moose Emphasis Area (MEA)

Assessment: ACHIEVED. The desirable levels are set habitat proportions for browse (5-30%), hardwood (20-55%) and mature conifer (15-35%) consistent with the Stand and Site Guide. The target level is to move towards or maintain the desirable level of habitat types through implementation of planned harvest in this 10-year plan period.

- The spatial impact of LTMD harvest was analyzed in OLT.
- Overall achievement is very good (Table 37). Minor deviations (3) from habitat desirable or target range achievement as noted below. All other MEAs and habitat types are projected to be within the desirable ranges with LTMD preferred harvest implemented.
- MEA #1 - Browse increases to within desirable range, Hwd/Mix is maintained within range, MatCon is maintained 2% above range.
- MEA #2 - Browse and Hwd/Mix are maintained in desirable ranges, MatCon decreases 6% towards range (target achieved) and remains 3% above range.
- MEA #3 - Browse increases to within desirable range, Hwd/Mix is maintained within range, MatCon increases 1% and remains below range.
- MEA #4 - All habitats maintained within desirable ranges.

Table 37 Assessment of Moose Habitat by MEA

Indicator	Plan Start 2022	Desirable Level	Plan End 2032 LTMD
(4a) Habitat Proportion by Moose Emphasis Area:		Move towards and maintain range:	
MEA #1 - Aulneau Peninsula:			
Browse Producing Forest	3%	5-30%	5%
Hardwood/Mixedwood Forest	43%	20-55%	41%
Mature Conifer Forest	37%	15-35%	37%
MEA #2 - Maybrun			
Browse Producing Forest	13%	5-30%	19%
Hardwood/Mixedwood Forest	34%	20-55%	31%
Mature Conifer Forest	44%	15-35%	38%
MEA #3 - North English River			
Browse Producing Forest	3%	5-30%	8%
Hardwood/Mixedwood Forest	42%	20-55%	36%
Mature Conifer Forest	8%	15-35%	9%
MEA #4 - South English River			
Browse Producing Forest	13%	5-30%	12%
Hardwood/Mixedwood Forest	36%	20-55%	33%
Mature Conifer Forest	30%	15-35%	31%

1 **FINAL PLAN NOTE:** See Section 4.9.6 for the comparison of LTMD Plan Start 2022 to
2 the revised estimate for Plan Start 2022 considering 2021 wildfires and revised forecast
3 depletions. Section 4.9.6 also provides a revised objective achievement comparison for
4 Plan End 2032 with LTMD and final FMP planned harvest.
5
6

7 **Indicator 4b: Frequency of Young Forest Patch Size by MEA**

8 **Assessment: PARTIALLY ACHIEVED.** The desirable level is for all young forest
9 patches to be in three size classes ≤ 500 ha. Target levels to move towards the
10 desirable frequency by size class were accepted by the Planning Team in recognition
11 that landscape pattern indicators may take more than one 10-year plan period to
12 achieve desirable levels.

- 13 • The harvest strategy in MEAs is to maintain a high proportion of small, young
14 forest patches to maximize edge. This strategy and young forest patch size
15 projected achievement may be improved through operational planning and
16 harvest block layout.
- 17 • Overall achievement is good (Table 38). Only MEA #3 moves away from the
18 desirable range, with an 11% increase of larger patches in the 501-1,000 ha size
19 class. All other MEAs are projected to meet desirable level (with all young forest
20 patches ≤ 500 ha) with LTMD preferred harvest implemented.
- 21 • MEA #1- achieved with all patches ≤ 250 ha
- 22 • MEA #2 - improved, and achieved with all patches ≤ 500 ha
- 23 • MEA #3 - moves away from desirable level with added 11% young forest
24 frequency in 501-1,000 ha size class at plan end. Harvest pattern may be
25 improved through operational planning.
- 26 • MEA #4 - improved, and achieved with all patches ≤ 500 ha

27
28 **FINAL PLAN NOTE:** See Section 4.9.6 for the comparison of LTMD Plan Start 2022 to
29 the revised estimate for Plan Start 2022 considering 2021 wildfires and revised forecast
30 depletions. Section 4.9.6 also provides a revised objective achievement comparison for
31 Plan End 2032 with LTMD and final FMP planned harvest.
32

1 **Table 38 Assessment of Frequency of Young Forest Patch Size by MEA**
2

Indicator	Plan Start 2022	Desirable Level	Plan End 2032 LTMD	
(4b) Frequency of Young Forest Patch Size by MEA:				
MEA #1 - Aulneau Penn.				
<100 ha	93%	100% of young forest patches in the <100, 101-250, and 251-500 ha size classes	91%	
101-250 ha	7%		9%	
251-500 ha	0%		0%	
501-1,000 ha	0%		0%	
1,001-2,500 ha	0%		0%	
2,501-5,000 ha	0%		0%	
5001-10,000 ha	0%		0%	
10,001-20,000 ha	0%		0%	
>20,000 ha	0%		0%	
MEA #2 - Maybrun:				
< 100 ha	67%			62%
101-250 ha	15%			28%
251-500 ha	11%			10%
501-1,000 ha	7%			0%
1,001-2,500 ha	0%			0%
2,501-5,000 ha	0%			0%
5001-10,000 ha	0%		0%	
10,001-20,000 ha	0%		0%	
>20,000 ha	0%		0%	
MEA #3 - N. English R:				
<100 ha	64%		48%	
101-250 ha	17%		38%	
251-500 ha	19%		3%	
501-1,000 ha	0%		11%	
1,001-2,500 ha	0%		0%	
2,501-5,000 ha	0%		0%	
5001-10,000 ha	0%		0%	
10,001-20,000 ha	0%		0%	
>20,000 ha	0%		0%	
MEA #4 - S. English R.:				
<100 ha	37%		83%	
101-250 ha	32%		15%	
251-500 ha	4%		2%	
501-1,000 ha	25%		0%	
1,001-2,500 ha	2%		0%	
2,501-5,000 ha	0%		0%	
5001-10,000 ha	0%		0%	
10,001-20,000 ha	0%		0%	
>20,000 ha	0%		0%	

3
4



3.7.3.5 Objective 6: Wood Supply

Indicator 6a: Area of Managed Crown Forest Available for Timber Production

Assessment: (ACHIEVED based on preliminary assessment) **FUTURE** assessment using the updated forest resources inventory for the 2032 FMP (FMPM 2020). The available forest for timber production through time is projected in the SFMM strategic modelling, so a preliminary assessment is also provided in this FMP. The desirable level is to maintain a minimum of 493,000 ha of Managed Crown forest available for timber production over the next 100 years. The LTMD projects available forest area to decrease 2% from 503,772 ha at 2022 to 493,468 ha in 100 years (2122) (Table 39). It is expected that in the next 70-80 years, the majority of the Kenora Forest will be accessed, after which the amount of available forest area should be stable with minimal additional losses from road construction.

Table 39 Projected Available Forest Area Through Time

Indicator:	(6a)
10-year Period (Start)	Available Forest:
2022	503,772
2032	501,468
2042	499,437
2052	497,575
2062	495,730
2072	494,075
2082	494,073
2092	493,997
2102	493,654
2112	493,522
2122	493,468
2132	493,468
2142	493,468
2152	493,468
2162	493,468
2172	493,468
2182	493,468
Desirable Upper	n/a
Desirable Lower	493,000

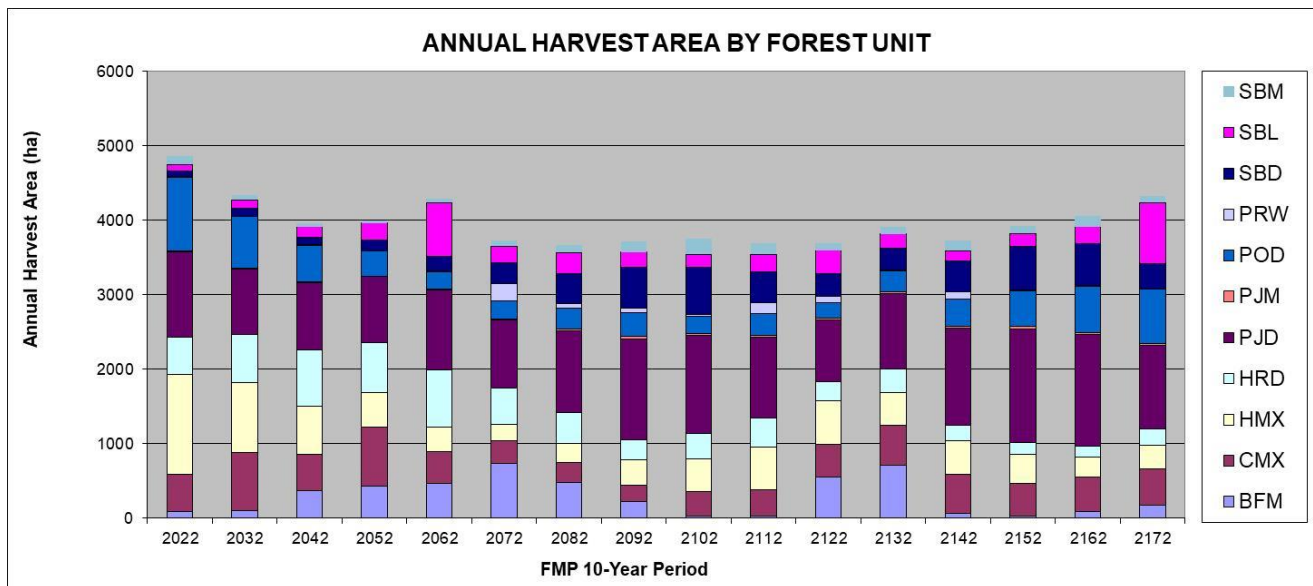
FINAL PLAN NOTE: Projected Available Forest Through Time is assessed as **ACHIEVED**. For the comparison of planned operations to LTMD (Section 4.9.6, the estimated reserve area was increased by 34,000 ha to reflect all reserve types and AOCs applied to the whole Kenora Forest for this final FMP. The increased reserve area is classified as “available” in the forest resources inventory, and does not represent a loss of available forest to non-productive land. Final Plan Achievement is comparable to the LTMD assessment.

1 **Indicator 6b: Long-term Harvest Area**

2 **Assessment:** **ACHIEVED.** The desirable level is the long-term AHA required to
 3 balance objective achievement and operational considerations.

- 4 • Harvest area is projected through time to achieve harvest volumes and to provide
 5 for a good balance of objective achievement in short and long-term (Figure 35).
- 6 • Short-term available harvest areas in the 2022-2032 FMP averages 4,859 ha per
 7 year, or 48,587 ha for the 10-year plan period.
- 8 • The LTMD available harvest area level is greater than the 2012 FMP available
 9 harvest area (4,859 ha versus 4,158 ha per year in the 2012 FMP). The increase
 10 in projected available harvest area results from a continuation of the strategic
 11 direction for the Kenora Forest with minor adjustments to modelling assumptions
 12 and revised desirable levels for management objective indicators.
- 13 • The projected annual harvest area in the LTMD was compared to the historical
 14 planned and actual total harvest areas for 1991 through to 2122, as well as the
 15 2012-2022 FMP, in Section 3.7.1.1 (Figure 29).
- 16 • Long-term AHA is reported in Table FMP-8.

17
 18 **Figure 35 Projected Total Available Harvest Area 2022-2172**
 19



20
 21
 22 **Indicator 6c: Long-term Harvest Volume by Species Group**

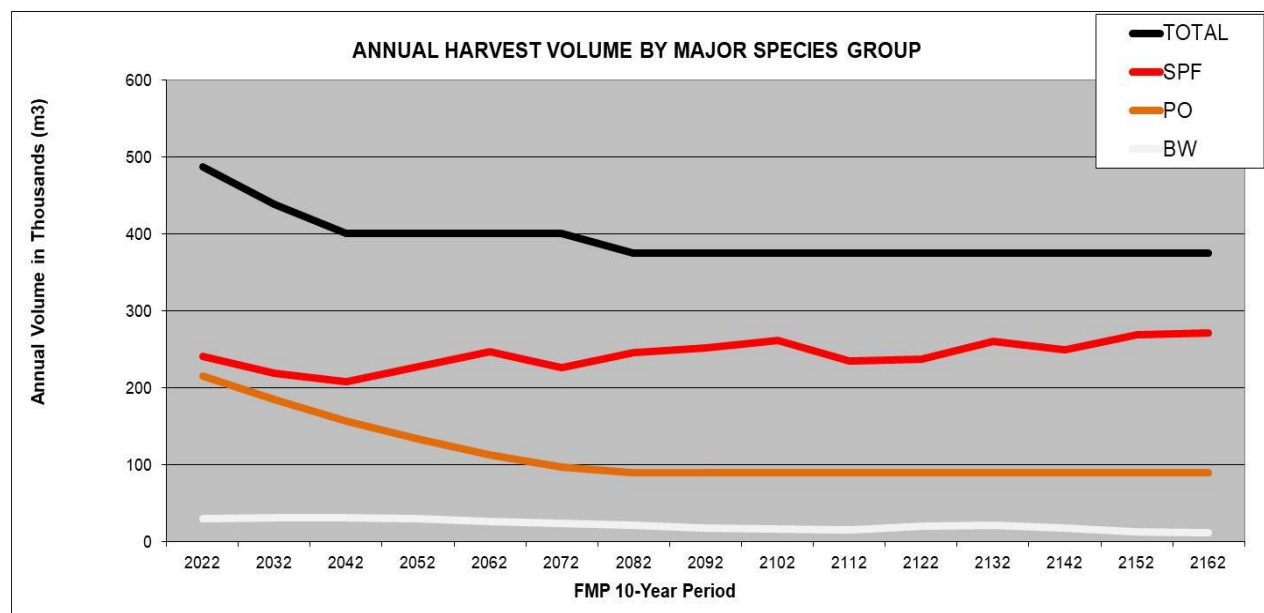
23 **Assessment:** **ACHIEVED.** The desirable level is to meet or exceed recognized wood
 24 supply commitments (reported by volume by major species group).

- 25 • Major volume species groups include: Spruce-Pine-Fir, Poplar, and White Birch.
 26 Red Pine – White Pine and incidental species (cedar, larch and black ash) are
 27 not considered major species groups on the Kenora Forest.

- 1 • This short-term harvest volume was strategically modelled to ensure a
- 2 satisfactory LTMD result, which is consistent with harvest-related stated desired
- 3 forest and benefits, including mill demand.
- 4 • Short to long-term harvest volumes meet commitments, except long-term Poplar
- 5 falls below current commitment. Overall volumes are acceptable with
- 6 consideration for balanced objective achievement and increase in conifer area.
- 7 • Short-term Available Harvest Volume is 487,200 total net merchantable cubic
- 8 metres per year for 2022-2032 (breakdown and discussion by major species
- 9 group in Section 3.7.1.2 Available Harvest Volume).
- 10 • An estimated 244,650 m3 of defect volume and 93,300 m3 of undersized volume
- 11 per year are potentially available through harvest of the full available harvest
- 12 area for this 10-year plan period.
- 13 • The annual total harvest volume level in the LTMD for the 2022-2032 Kenora
- 14 FMP (487,200 cubic metres) is 10% higher than the harvest volumes projected in
- 15 the selected management alternative for the 2012-2022 FMP (443,500 cubic
- 16 metres). The increased harvest volume corresponds to the increase in harvest
- 17 area discussed above. The increase in harvest area and volume is a result of
- 18 desired forest and benefits included in management objective indicators while
- 19 balancing other socio-economic indicators and forest sustainability that are
- 20 consistent with strategic direction from the 2012-2022 FMP.
- 21 • The Planning Team carefully considered the impact of the 2022-2032 projected
- 22 harvest area on long-term harvest area/volume and future desired forest and
- 23 benefits. The Planning Team supports this balance of long-term objective
- 24 achievement.
- 25

26 **Figure 36 Projected Total Available Harvest Volume 2022-2172**

27



28



1 **Indicator 6d: Long-term Harvest Volume by Broad Size Group**

2 **Assessment: ACHIEVED.** The desirable level is to maintain or increase the proportion
3 of “large”-sized volumes (≥ 20 cm DBH) as compared to 2022 Plan Start.

- 4 • Strategic modelling inputs included proportions for small and large volume on the
5 forest, which resulted in reported volume breakdown by broad size group through
6 time.
- 7 • The proportion of harvest volume by broad size groups is calculated to be similar
8 or greater (7-9% of "large" sized volume) throughout planning horizon, as
9 compared to Plan Start 5%.
- 10 • Harvest volumes are directed towards wood receiving mills primarily based on
11 mill demand and tree species, rather than stem size or potential product. There
12 are markets for all wood from the Kenora Forest.
- 13 • This indicator will provide baseline information that can be expanded in future
14 FMPs.

15
16 **3.7.3.6 Objective 7: Indigenous Engagement**

17
18 **Indicator 7a: Opportunities for Involvement of Indigenous Communities and**
19 **Métis Nation of Ontario in Plan Development**

20 **Assessment: ACHIEVED** desirable level. The desirable level is for 100% of Indigenous
21 communities in or adjacent to the Kenora Forest to be provided an opportunity to
22 contribute during plan development.

23
24 All (100%) 16 Indigenous communities affected by forest management activities on the
25 Kenora Forest were contacted by NDMNRF early in the planning process with an
26 Invitation to Participate and an offer for each to identify a Community Representative to
27 participate on the FMP Planning Team. Contact very early in the planning process
28 provided the greatest opportunity for involvement, and ensured that all affected
29 Indigenous communities were aware of opportunities for engagement in plan
30 development.

31
32 The Kenora District NDMNRF also offered each Indigenous community the opportunity
33 to develop a customized First Nation and Métis Consultation Approach. While no
34 community requested a specific customized approach, discussions were held regarding
35 the opportunity to have these developed in the future. Four (4) First Nation
36 communities identified individuals that participated on the Planning Team as First
37 Nation Community Representatives. However this participation was interrupted by the
38 Coronavirus pandemic in March 2020.

39

1 There was additional communication with Indigenous communities at each stage of plan
2 production, as well as multiple times between formal opportunities to encourage
3 involvement in plan development, contribution to their community's Background
4 Information Report and First Nation and Métis values identification, as well as other
5 components of plan development (desirable level of 100% was achieved). NDMNRF
6 will continue efforts to get responses and input into the First Nation and Métis reports in
7 order that they are as accurate and useful in the planning process as possible.

8
9 Unprecedented Coronavirus pandemic response during March 2020 to May 2021 (and
10 beyond) hindered Indigenous communities' ability to meet and respond during plan
11 development when efforts were focused on their communities and members, not on
12 forest management plans. During this time, NDMNRF staff has not received any
13 requests to meet with community representatives to discuss the plan, nor have
14 communities responded to correspondence sent during this time period regarding the
15 plan.

16
17 In response to feedback on various methods and timing for consultation, NDMNRF and
18 relevant Planning Team members met with community representatives or members
19 several times throughout plan development. These meetings took various forms
20 depending on the individual consultation methods each community asked for: informal
21 meetings with certain individuals, community meetings, specific FMP meetings (such as
22 a Desired Forest and Benefits meeting with the Métis Nation of Ontario), phone calls,
23 and/or written correspondence. Whenever requested, NDMNRF and Planning Team
24 members provided information in formats as requested by the community. For
25 example, a summary of Desired Forest and Benefits meeting background material,
26 specific maps or digital products as requested by the community.

27
28 While this indicator was assessed for the Draft Plan, communications continue through
29 to final plan development with consideration for any Indigenous comments received.
30 NDMNRF district and Miisun staff continue efforts to aid Indigenous engagement during
31 the challenging coronavirus pandemic.

32
33 **FINAL PLAN NOTE:** With a continuation of coronavirus pandemic health measures
34 through to final plan submission in 2021, communications with Indigenous communities
35 continued with limited engagement. NDMNRF staff continued to consider ways to
36 support meaningful consultation with communities that may have had varying levels of
37 capacity during these challenging times including seeking alternative methods to
38 provide information such as mapping products (e.g. email, arrangements made for pick-
39 up). NDMNRF encouraged communities to communicate any limitations or additional

1 support needed to participate in meaningful consultation to support each community's
2 continued involvement in the FMP process.

3

4 **3.7.3.7 Objective 8: Local Citizens' Committee Engagement**

5

6 **Indicator 8a: LCC Self-evaluation on Committee Effectiveness**

7 **Assessment: ACHIEVED.** The desirable level is for LCC Effectiveness survey results
8 to indicate at least 70% effectiveness in the development of the management plan
9 (Target level 60%, if desirable level was not met).

- 10 • The LCC completed their self-evaluation survey just before Draft Plan
11 submission and results were compiled showing 86% overall effectiveness in FMP
12 development, achieving the desirable level (Table 40). A result of 86% is a very
13 good satisfaction rating, tabulated from responses from all 9 LCC members.
- 14 • For Draft Plan, results of this survey are included in the LCC Summary Report
15 file: MU644_2022_FMP_TXT_LCCReport.PDF
- 16 • LCC members felt they were very well informed on the FMP process and Kenora
17 Forest FMP content, including regular progress updates during plan production.
18 Not all LCC members were able to attend FMP training sessions.
- 19 • There was generally very good involvement and participation by individual LCC
20 members during FMP development, and all had good opportunities to voice
21 opinions.
- 22 • There was very good support for the usefulness of the Desired Forest and
23 Benefits meeting as a means to assess what local citizens want from the forest.
- 24 • Overall, the LCC assessed that it was effective in influencing FMP decisions.
- 25 • The LCC provided views of stakeholders groups well, with limited engagement of
26 stakeholders about the FMP by a few LCC members.
- 27 • After the LCC self-evaluation survey, NDMNRF district staff consulted with the
28 LCC to discuss why certain questions received a lower score, and to get
29 suggestions to improve LCC involvement in the future.

30

1 **Table 40 Results of LCC Self-Assessment of Effectiveness Survey**

2

Kenora 2022-2032 Forest Management Plan LCC Self-Evaluation Survey											
Score: 1 = strongly disagree; 5 = strongly agree											
Questions	Participant 1*	Participant 2*	Participant 3*	Participant 4*	Participant 5*	Participant 6*	Participant 7*	Participant 8*	Participant 9*	Average	
	Score	Score	Score	Score	Score	Score	Score	Score	Score	Score	
Informed											
1	I was provided with good understanding of the FMP process	5	5	5	5	5	4	4	5	4	4.7
2	I was provided with adequate training and information was given to me to assist me in understanding the FMP process	5	5	5	5	5	4	1	5	2	4.1
3	I have an adequate understanding of the contents of the FMP	5	5	5	5	5	4	3	5	3	4.4
4	I was provided with sufficient and accurate information to enable me to make informed decisions	5	5	5	5	5	4	3	5	4	4.6
5	I was provided with regular updates on the progress of the FMP by planning team members	5	5	5	5	5	4	4	5	5	4.8
Involved											
6	The LCC has been provided with an adequate opportunity to become involved with the FMP	5	5	5	5	5	4	4	5	5	4.8
7	I have been given adequate opportunity to voice my opinions within the LCC	5	5	5	5	5	4	4	5	3	4.6
8	I have participated in LCC discussions regarding the development of the FMP	5	5	3	5	3	4	4	5	3	4.1
9	I feel that the planning team considered all viewpoints in developing the FMP	5	5	5	5	3	4	4	5	5	4.6
10	I thought the Desired Forest and Benefits meeting was a useful way to gather input and assess what local citizens want from the forest.	5	5	5	5	3	4	4	5	n/a	4.5
Influential											
11	The LCC is effective at influencing decisions made in the FMP	5	5	5	5	2	4	3	3	4	4.0
12	I was able to personally influence the decisions made in the FMP	5	5	5	5	2	3	3	5	1	3.8
13	I feel that the FMP team considered my opinions in forming their decisions	5	5	5	5	2	4	4	5	3	4.2
14	I believe the results of the Desired Forest and Benefits meeting were incorporated into the FMP	5	5	5	5	3	4	4	5	n/a	4.5
Representative											
15	I was able to represent the views of my stakeholders as a member of the LCC	5	5	5	3	3	4	4	5	3	4.1
16	I actively engaged my stakeholders in discussions about the forest management plan	5	5	5	3	2	3	2	3	3	3.4
17	The LCC contains a broad cross-section of stakeholders	5	5	5	3	4	4	4	5	3	4.2
18	I feel that other members on the LCC accurately reflected their stakeholder's viewpoints	5	5	5	4	3	4	4	3	4	4.1
19	Other LCC members were regular attendees of committee meetings and related functions	3	5	5	4	4	4	5	5	4	4.3
Out of 9 members, MNR received 9 returned forms											
4.9 5.0 4.9 4.6 3.6 3.9 3.6 4.7 3.5 4.3											
86%											

3
4



1 **3.7.3.8 Summary of Indicators Measured After Plan Implementation**

2

3 Some objectives indicators measure the results of plan implementation, such as actual
4 harvested area or volumes, results of silvicultural renewal activities, amount of certain
5 forest types or age groupings after harvest and renewal, compliance with planned forest
6 operation Inspections and implementation of Area of Concern prescriptions.

7

8 The following 22 indicators of objective achievement are measured after the forest
9 management plan implementation, specifically in the Year 5 Annual Report, and Annual
10 Report for final year of plan implementation. Twelve (12) indicators will be measured for
11 the first time at the plan mid-point and end of implementation of the FMP period. Also,
12 of the 18 indicators measured during plan development, three (3) caribou habitat
13 indicators, five (5) forest composition indicators, and two (2) landscape pattern
14 indicators are also re-measured for the Annual Reports for Year 5 and the final year of
15 the plan. See Section 3.6.2 for details on the desirable and target levels, and timing of
16 assessment.

17

18 Objective 1: Caribou Habitat

19 Indicator 1a: Caribou Habitat Area (re-measured)

20 Indicator 1b: Texture of Caribou Winter Habitat (re-measured)

21 Indicator 1c: Texture of Caribou Refuge Habitat (re-measured)

22 Indicator 1d: Conifer Purity in Jack Pine and Black Spruce LGFUs

23 Indicator 1f: Actual Upland Conifer Successfully Regenerated to Conifer

24 Objective 2: Forest Composition

25 Indicator 2a: Landscape Class Area (re-measured)

26 Indicator 2b: Old Growth Forest Area (re-measured)

27 Indicator 2c: All Ages Red Pine and White Pine Forest Unit Area (re-
28 measured)

29 Indicator 2d: Upland Jack Pine and Spruce (re-measured)

30 Indicator 2e: Young Forest Area (re-measured)

31 Objective 3: Landscape Pattern

32 Indicator 3a: Texture of Mature and Old Forest (re-measured)

33 Indicator 3b: Young Forest Frequency by Patch Size (re-measured)

34 Objective 5: Forest Access

35 Indicator 5a: Density of SFL Primary & Branch Road, by zone

36 Objective 6: Wood Supply

37 Indicator 6a: Available Forest Area

38 Indicator 6e: Actual Harvest Area by Forest Unit

39 Indicator 6f: Actual Harvest Volume by Species Group

1 Objective 9: Forest Renewal

2 Indicator 9a: Percent of Harvested Area Assessed as Successfully
3 Established (by forest unit)

4 Indicator 9b: Planned and Actual Percentage of Harvest Area Treated by
5 Broad Treatment Type

6 Indicator 9c: Planned and Actual Percentage of Harvest Area
7 Successfully Regenerated to Target Forest Unit, by Forest Unit

8 Objective 10: Forest Values

9 Indicator 10a: Percent of Forest Operation Inspections in Non-
10 Compliance, by activity and remedy type

11 Objective 11: Healthy Ecosystems

12 Indicator 11a: Percent Compliance with Management Practices that
13 Prevent, Minimize, or Mitigate Site Damage, by activity and remedy type

14 Indicator 11b: Percent Compliance with Management Practices that
15 Protect Water Quality and Fish Habitat, by activity and remedy type

3.7.3.9 Conclusion of Assessment of Objective Achievement

FINAL PLAN NOTE: See Section 4.9.6 for the revised objective achievement comparison for Plan End 2032 with LTMD and final FMP planned harvest, with consideration for 2021 wildfires and revised forecast depletions. The following summary documents objective achievement at LTMD / Draft Plan stages.

Of the 30 indicators in the FMP, 18 of the indicators can be assessed in the FMP and 12 will be assessed only after implementation of the plan.

Of the 30 plan indicators:

14 indicators **Achieved** desirable levels or movement towards desirable level through meeting the target level within the plan period;

3 indicators are **Partially Achieved** with achievement of or movement towards target levels;

1 indicator does **Not Achieve** desirable or target levels (young forest patch size frequency discussion below); and

12 indicators are measured in the **Future**, after plan implementation.

30

See subsections 3.7.3.1 to 3.7.3.7 for assessment related to individual indicators. Based on the assessment of objective achievement documented in Table FMP-10, the majority of the objective indicators had acceptable projections within desirable levels within this plan period, or met target levels with progression towards desirable levels. Overall, plan objectives are being met and progress is projected to be made towards the desired forest and benefits through implementation of the Long-term Management Direction.

All of the plan objective indicators measured at this stage are achieving or progressing towards desirable levels during this plan period (Table FMP-10), except one indicator as noted below:

Objective 3: Landscape Pattern Indicator 3b - Young forest patch size:

The frequency of small patches of young forest are projected to increase (away from mean, desirable level) on the Kenora Forest during the 10-year period. Desirable and target levels are not expected to be achieved until the long-term with implementation of harvest to defragment the forest and create more, larger young forest over many planning periods. This deviation in objective achievement was reviewed and considered acceptable by the Planning Team in the context of overall objective achievement.

- 1 **FINAL PLAN NOTE:** For final plan, the objective assessment of the following indicators
2 changed from their Draft Plan assessment due the area of 2021 wildfires (See Section
3 4.9.6):
- 4 Indicator 1b: **Texture of Caribou Winter Habitat** – revised to Not Achieved
5 Indicator 1c: **Texture of Caribou Refuge Habitat** – revised to Not Achieved
6 Indicator 1e: **On-line Caribou DCHS (%)** – revised to Not Achieved
7 Indicator 2c: **All Ages Red Pine and White Pine Forest Unit Area** – revised to Not
8 Achieved
9

3.7.4 Spatial Assessment of Projected Harvest Area

A number of preliminary spatial assessments were conducted to analyze achievement of management objectives that are influenced by the location of planned harvest areas. Documentation of these spatial analyses is included in FMP Supplementary Documentation B – Analysis Package. Brief summaries for each analysis follow.

Management Zones – Strategic management zones for emphasis of wildlife habitat management on the Kenora Forest were identified for caribou (Dynamic Caribou Habitat Schedule), moose, deer and elk. The Caribou Dynamic Habitat Schedule block timing was determined for the caribou zone, resulting in “B” blocks being available for operations 2022-2042. Operational management zones were identified for areas not already classified as strategic management zones. These operational zones were used in strategic modelling to provide spatial control to projected operations.

Harvest Areas - Preferred harvest areas for the 2022-2032 plan period adhere to the Dynamic Caribou Habitat Schedule timing for current and future caribou habitat management, consistent with inputs for SFMM strategic modelling. The spatial distribution of harvest over the first four FMP periods (i.e. for 40 years from 2022-2062) was projected in the LTMD. Operational zones with the majority of harvest were mapped and reviewed by the Planning Team. The 40-year projection of harvest was considered by the Planning Team to be generally operationally feasible and economically feasible.

Additional strategic and operational planning for the Kenora Forest will be conducted prior to forest management plan approvals for the future FMP periods 2032-2062.

Road access to DCHS “B” blocks for 2022-2032 is planned for construction in this FMP period. Additional access in the caribou zone “B” and “C” blocks for harvest 2032-2062 will be planned in the next 2-3 FMPs. All harvest areas and associated road access projected for this plan period 2022-2032 have been reviewed and are operationally feasible to implement. The 40-year harvest includes a balance of shorter and longer haul distances within each plan period to contribute to economic feasibility. All harvest blocks have been reviewed for general operational feasibility.

Landscape Pattern - Landscape pattern objectives include indicators for amount and arrangement of caribou habitat, and maintaining or enhancing natural landscape structure, composition and patterns that provide for the long-term health of forest ecosystems in an efficient and effective manner. Landscape pattern objectives were

1 built on the 2012 FMP objectives, and have been refined for this FMP in accordance
2 with the *Forest Management Planning Manual* (2020) and the *Forest Management*
3 *Guide for Boreal Landscapes* (2014).

4
5 Landscape pattern objectives were assessed in the LTMD (including the arrangement of
6 caribou habitat and mature and old forest). The Planning Team relied on NDMNRF
7 Ontario's Landscape Tool (OLT) records of the simulated natural forest condition when
8 determining appropriate desirable levels for landscape pattern indicators. Landscape
9 pattern objectives include indicators for arrangement of caribou habitat, texture of
10 mature and old forest, and young forest patch sizes. The Planning Team used Ontario's
11 Landscape Tool to measure management objective indicators for the texture of caribou
12 habitat, texture of mature and old forest and young forest patch size and compared this
13 to the mean of the Simulated Range of Natural Variation (Section 3.7.3, Objectives 1, 2
14 & 3, and Table FMP-10).

15
16 **Spatial Analyses Conclusion** – The overall spatial distribution of landscape pattern
17 (measured by Ontario's Landscape Tool) is improved in the medium to long-term
18 through implementation of the preferred harvest allocations in the LTMD. The spatial
19 distribution of projected harvest area for 40 years (2022-2062) was assessed and
20 considered to be spatially and economically feasible.

3.7.5 Social and Economic Assessment

The *Forest Management Planning Manual (2020)* requires that a Social and Economic Assessment (SEA) be prepared to identify the expected social and economic impacts of implementing the management strategy proposed in the Long-Term Management Direction (LTMD) for the development of this FMP. The assessment examines how the quantity of timber supplied in the wood processing facilities, and the silvicultural investment requirements for the proposed management strategy may affect the communities identified in the Social & Economic Description (Supplementary Documentation E).

A qualitative Social and Economic Assessment of timber volumes and silvicultural expenditures was completed and is based on the qualitative comparison of the annual planned harvest volume levels for the 2012 FMP and the levels shown in LTMD for the 2022-2032 FMP. The Long-Term Management Direction projects a 10% increase in total net merchantable harvest volume during this plan period as compared to the 2012-2022 FMP. The 2012-2022 FMP included 443,600 m³ per year (TOTAL all species), 240,000 Spruce-Pine-Fir. The 2022-2032 LTMD includes 487,200 m³ per year (TOTAL all species), 240,000 Spruce-Pine-Fir.

The socio-economic impacts from wood utilization by the forest industry supplied by the Kenora Forest is expected to be slightly more positive with implementation of the 2022-2032 FMP (based on harvest of increased LTMD volumes). The projected increase in volume would likely increase direct and indirect socio-economic effects to the Province of Ontario as provided in the 2012 FMP. Increased harvest volumes generally result in higher industry output, person years of employment and gross domestic product.

The impacts of forest management and operations on recreation and tourism are not dependent on the harvest level but rather how the specific value has been addressed. The impacts of forest management on mining and mineral exploration and baitfish operations are mainly positive. Forest operations will directly affect certain traplines and not others depending on where harvest allocations are planned (may either be positive or negative impact). Bear management area (BMA) operators may also be affected by both the harvest operations and road access. Stakeholder involvement during plan development will allow consideration for other values and users to be incorporated in the FMP to minimize potential negative impacts from forest operations.

Overall, the social and economic assessment for the plan suggests the social and/or economic benefits for the 2022-2032 FMP will be similar to those of the 2012-2022 plan.



3.7.6 Risk Assessment

This section of the FMP summarizes the risk to plan implementation, if certain decisions made during development of the Long-Term Management Direction do not come to pass. The following bullet points describe certain assumptions and associated potential barriers to successful implementation of the FMP Long-Term Management Direction:

Lack of markets or mill labour disputes could reduce the demand for wood from the Kenora Forest. **Low Risk:** While market fluctuations may occur, this is not influenced by the FMP Planning Team.

Failure of approval of Umfreville Road segment on Whiskey Jack Forest – The access to the northern caribou zone requires construction of the proposed Umfreville Road, which would require about 6 km out of the 72 km of proposed new road construction to be on the northern portion of the adjacent forest management unit (due to lakes and other difficult terrain considerations on the Kenora Forest). **Moderate Risk:** Failure to build the road would eliminate access to the eastern portion of the Kenora Forest DCHS area, as well as Z14, Z15 and a significant portion of MEA3 operational zones. Eliminating harvest in these areas would reduce short and long-term harvest opportunity and associated objective achievement.

FINAL PLAN NOTE: See Section 5.4 – This road has been removed from the final FMP due to burning of eligible harvest area to be accessed by this road.

Failure of approval or construction of proposed new primary roads is a risk to accessing planned harvest blocks during 2022-2032 and 2032-2042 (applies to roads other than the Umfreville Road segment on the Whiskey Jack Forest). **Low Risk:** Primary roads are approved in this FMP, and planned for construction. Any delay in primary road construction would be mitigated through the reselection of approved harvest areas, accessible by existing roads or other branch roads.

FINAL PLAN NOTE: See Section 5.4 – The Sydney East and Sydney West Roads have been removed from the final FMP due to burning of eligible harvest area to be accessed by these roads (reduced risk even lower than estimated at LTMD).

Harvesting on the Aulneau Peninsula – LTMD included minimal harvest on the Aulneau Peninsula 2022-2023, and continued harvest thereafter in all terms. Scoping runs were conducted to explore impact of delaying harvest for 40, 100, or 160 years. No significant impacts with 40 year deferral as operations in rest of forest compensate to still achieve objectives. Delay 100-160 years has minimal impact, but does reduce achievement for Moose browse, young forest, red pine-white pine area. **Low Risk:** to objective achievement, however more significant impacts to Aulneau landscape composition and pattern. If harvesting does not occur on the Aulneau Peninsula during

1 this 10-year plan period, the preferred harvest of approximately 2,000 ha will not be
2 reallocated elsewhere on the forest.

3
4 Failure to achieve successful forest renewal results is a risk to achieving long-term
5 forest structure and composition objectives. **Moderate Risk:** In order to achieve
6 certain Boreal Landscape Guide indicators, such as an increase in pure conifer stands,
7 there is a need to reduce mixedwood stands. Successful conversion to conifer may
8 require tending activities such as herbicide application. A loss of herbicide use as a
9 forest management tool could negatively impact success of the renewal program
10 required for projected objective achievements.

11
12 Risk Assessment Conclusion – A change in the above FMP decisions are considered
13 minimal or low risk to overall, successful implementation of the Long-Term Management
14 Direction for the 2022-2032 FMP.

15 3.7.7 Preliminary Determination of Sustainability

16 **FINAL PLAN NOTE:** See Section 5.0 for the final Determination of Sustainability
17 based on final planned operations and updated forest condition due to 2021
18 wildfires.
19
20

21
22 The overall determination of sustainability is based on the collective assessment of
23 objective achievement, the spatial assessment, the social and economic assessment
24 and prescriptions for the protection of values.

25
26 Overall, based on the quantitative and qualitative objectives (Table FMP-10) that can be
27 assessed during preparation of the forest management plan, there has been
28 achievement in meeting or exceeding the desirable levels and associated targets for
29 most indicators (forest condition, and goods and services).

30
31 From a spatial perspective, the objectives related to landscape pattern has been
32 achieved or movement towards achievement has been demonstrated through projected
33 implementation of the LTMD.

34
35 The social and economic assessment for this FMP indicates that current levels of social
36 or economic benefits are projected to increase slightly for the 2022-2032 plan period, in
37 comparison with the 2012-2022 FMP.

38
39 The risks of using improper assumptions for strategic planning or risks to
40 implementation of the LTMD as planned are all Low to Moderate risk.

1 Overall, the assessment of objective achievement, the social and economic assessment
2 and the Stage Two: Long-term Management Direction all demonstrated that the 2022-
3 2032 Forest Management Plan for the Kenora Forest has regard for plant life, animal
4 life, water, soil, air, social and economic values, including recreational and heritage
5 values. As a result, it was concluded at the LTMD stage, that this forest management
6 plan provides for the sustainability of Ontario's Crown forest. See Section 5.0 for the
7 final Determination of Sustainability for the FMP.

1 4.0 PLANNED OPERATIONS

2 4.1 Introduction

3

4 This section of the plan includes a description of the planned operations for the 10-year
5 period from 2022-2032, including harvest (regular, bridging, salvage), operational
6 prescriptions, renewal and tending, renewal support, forest access and road use
7 management, estimated renewal expenditures, and monitoring and assessment
8 activities. Harvest volumes and wood utilization by mill, contingency harvest area and
9 associated contingency harvest volumes are also discussed in this section.

10

11 The monitoring and assessment program that will be carried out during the plan term,
12 including forest operation inspections, exceptions monitoring, assessment of
13 regeneration, and monitoring of roads and water crossings is included in Section 4.7.

14

15 Finally, a comparison of the 2022-2032 planned operations to the Long-Term
16 Management Direction (LTMD) is provided in Section 4.9.

17

18 Operational planning for the Kenora Forest was done with the involvement of
19 interdisciplinary planning team. Members of the NDMNRF were instrumental in
20 identifying and mapping values, and ensuring that people with known interests in areas
21 or values were notified and asked to contribute. The NDMNRF set the broad direction
22 as well as more specific direction such as managing the Kenora Forest for a natural
23 landscape pattern, and managing for caribou habitat in the caribou zone. Miisun
24 determined the harvest allocations and areas of concerns prescriptions with input and
25 assistance from planning team members. The public was notified and had formal public
26 review opportunities during the planning process. Where possible, individuals and
27 interested parties suspected of having an interest in the allocations were specifically
28 sought out and asked for their input during development of the plan.

1 **4.2 Prescriptions for Operations**

2 **4.2.1 Operational Prescriptions and Conditions for Areas of Concern**

3
4 An “area of concern” (AOC) is a defined geographic area, adjacent to or surrounding an
5 identified value, within the areas selected for operations. A detailed prescription is
6 developed for the area of concern in order to prevent, minimize or mitigate adverse
7 effects of forest management operations on the value. NDMNRF guidelines, site
8 inspection by ground and air, regular and supplementary aerial photographs, contour
9 and elevation maps, slope analysis, and local knowledge of trappers, First Nations and
10 Métis groups, tourist operators and logging companies were used to identify area of
11 concern prescriptions in order to consider and protect an identified value.

12
13 All operational prescriptions for areas of concern (AOC) prepared for the 10-year plan
14 period are presented in Table FMP-11. Area of concern identifiers are cross-referenced
15 and included in the digital spatial layer submitted as part of the electronic forest
16 management plan. AOC operational prescriptions taken directly/implemented from an
17 existing forest management guide do not require the preparation of additional
18 supplemental documentation. AOC operational prescriptions developed on the basis of
19 other direction, such as those developed by the planning team in the absence of
20 existing guidelines, or that are not directly consistent with an existing forest
21 management guide, are detailed in Supplementary Documentation J.

22
23 Some AOC identification codes have been revised from the codes used in the 2012-
24 2023 FMP, and some codes are new for new AOC prescriptions for this 2022-2032
25 FMP. For reference of the forest managers and interested parties, the following table
26 (Table 41) shows the old and new codes for the AOC prescriptions:

1 Table 41 2022 FMP AOC Codes and Corresponding 2012 FMP AOC Codes

2

Cultural & Heritage		2012 FMP Code
A01	Archaeological Potential Areas	Same
A02	Cultural or Heritage Value	New
C01	Trap cabin	New
Indigenous Values		
FN1	First Nation Reserve	FL01
I01	Indigenous Values – Constructed Stone Features (Indigenous-made formations and arrangements of stone)	New
I02	Indigenous Values – Natural Stone Features (significant glacial erratics or groups of erratics, unique natural arrangement of large stone, rock faces and outcrops)	New
I03	Indigenous Values – Culturally Modified Trees (e.g. historical modification due to usage as trail markers, historic evidence indicating canoe making on Birch and Cedar)	New
I04	Indigenous Values – Historical Indigenous Camp (cultural gatherings, historical traditional hunting, fishing, and gathering locations)	New
I05	Indigenous Values – Material Gathering Sites (traditional gathering sites of medicinal plants, edible plants and craft materials)	New
I06	Indigenous Values – Indigenous Cultural Heritage Landscapes (historic or in current use including sacred and ceremonial sites, pictographs, petroglyphs, and significant landscape topography (may overlap areas of A01 or A02).	New
I07	Indigenous Value – Significant Indigenous Harvesting Area (important wildlife habitat features, important areas for harvesting)	New
Mammal Values and Dens		
D01	Occupied Black Bear Den (Dens known or suspected to contain one or more hibernating black bears. Applies to occupied dens known before or found during operations)	Same
D02	Occupied Gray Fox Den	Same
D03	Occupied Cougar Den	Same
D04	Occupied Wolf or Coyote Den	Same
D05	Wolverine dens (natal and maternal dens)	New
M01	Mineral Lick (Natural mineral licks known or encountered during operation. Salt accumulated along roadways excluded.)	Same
M02	Caribou Calving and Nursery Areas (CNA)	New
M03	Moose Thermal Summer Patches	New
M04	Moose Winter Cover Stands	New
M05	Bat Hibernacula	B01
M06	Bat Roosting Site	B02
M07	White-tailed Deer Critical Thermal Cover	New
Bird & Other Nests		
N01	Bald Eagle primary nest	Same
N02	Bald Eagle inactive nest	N03



4.0 PLANNED OPERATIONS

Prescriptions for Operations
Operational Prescriptions and Conditions for AOCs

<u>N03</u>	Osprey primary nest	ON01
<u>N04</u>	Osprey inactive nest	ON03
<u>N05</u>	Active Great Blue Heron Colonies	BH01
<u>N06</u>	Inactive Great Blue Heron colonies	BH02
<u>N07</u>	Active colonies of Bonaparte's Gull	BG01
<u>N08</u>	Active bank swallow nest or colony	BS01
<u>N09</u>	Primary nest of great gray owl, northern goshawk or red-shouldered hawk	HO01
<u>N10</u>	Alternate nest of great gray owl, northern goshawk or red-shouldered hawk	HO02
<u>N11</u>	Inactive nest of great gray owl, northern goshawk or red-shouldered hawk	HO03
<u>N12</u>	Stick nests occupied by barred owl, broad-winged hawk, common raven, Cooper's hawk, great horned owl, long-eared owl, merlin, red-tailed hawk, or sharp-shinned hawk	NO01
<u>N13</u>	Nests/ communal roosts in cavities occupied by American kestrel, barred owl, boreal owl, eastern screech-owl, great horned owl, northern hawk owl, northern saw-whet owl or chimney swift	NO02
<u>N14</u>	Ground nests occupied by northern harrier, short-eared owl, or turkey vulture	NO03
<u>N15</u>	Whip-poor-will Nesting Sites	NO04
<u>N16</u>	Common Nighthawk Nesting Habitat	NH01
<u>N17</u>	Barn Swallow Nesting Sites	BS02
<u>N18</u>	Trumpeter Swan Nesting Sites	NE9
<u>N19</u>	Snapping Turtle – Nesting Habitat	New/Updated ST01
Protected Ownerships, Railroad & Transmission Corridors		
<u>HL1</u>	Hydro Line Right-of-Way	New
<u>NG1</u>	Natural Gas Transmission Pipeline	NG01
<u>PL1</u>	Patent Land and Land Use Permits	PL01
<u>PP1</u>	Provincial Park and Other Protected Areas	New
<u>RR1</u>	Railroad Right-of-Way	RR01
Research and Experimental Plots		
<u>RP1</u>	Research Trials and Tree Orchards	New
<u>RP2</u>	Permanent Growth Plots (PGP)	PGP01
<u>RP3</u>	Permanent Sample Plot (PSP)	New
<u>RP4</u>	Multi-species Inventory and Monitoring (MSIM) Plot	New
<u>RP5</u>	Temporary Sample Plots	New



Tourism & Recreation		
T01	Tourism – Aesthetics Along High Volume Tourism Lakes and Roads	TV01
T02	Tourism – Aesthetics Along High Volume Tourism Lakes and Roads	New/Updated TV02
T03	Tourism – Aesthetics Along High Volume Tourism Lakes	New/Updated TV03
T04	Tourism – Road Aesthetics	New
Tar	Tourism – High Volume Tourism Access Roads	New
Tat	Tourism – Access Trail	New/Updated TVatv
Tcs	Tourism – Identified Campsites	New
Tmb	Tourism - Land Use Policy G2550 – Access Restrictions and Protection of Remoteness	New
Tnr	Tourism – No Operational Roads Zone	New
Tpt	Tourism – Identified Portage Trail	New/Updated TVp
Trd	Tourism – Aesthetics Along Recreational Property Access Roads	New
Tst	Tourism – OFSC Trail	TVstr
Tt1	Tourism - Timing Restriction and Noise Concerns	TVcb
Tt2	Tourism – Noise Disturbance	TVm
Tt3	Tourism – South Narrows Lake	TVsnl
Tt4	Tourism – Timing Restriction	TVw
Water & Fish Habitat & Wetlands		
W01	Reserves on Large lakes, medium lakes, small lakes, rivers, ponds and streams; HPS or MPS (high or moderate potential sensitivity to forest management operations)	WL01
W02	Streams with low potential sensitivity to forest management operations (LPS streams)	WS02
W03	Ponds with low potential sensitivity to forest management operations (LPS Ponds)	WL02
W04	Modified cut to shore on Large lakes, Medium lakes, Small lakes; Ponds – HPS or MPS (high or moderate potential sensitivity to forest management operations)	WL03
W05	Modified cut to shore on Rivers, HPS or MPS (high or moderate potential sensitivity to forest management operations) Stream segments	WL04
W06	Wetlands occupied by breeding black terns, least bitterns, golden-winged warblers, horned grebes or yellow rails	WW01
W07	Provincially Significant Wetlands	New
W08	Identified Fish Spawning Areas	New

1 AOC prescriptions for identified values are prepared based on the best information
2 available, as provided by the MNRF, land use policy direction (such as the *Crown Land*
3 *Use Policy Atlas*, (CLUPA)), and new information brought forward by First Nation and
4 Métis groups, the public and other stakeholders. AOC prescriptions are developed, as
5 required, where forest management operations (harvest, road development, renewal or
6 tending) are anticipated to impact values. Any objections to AOC prescriptions, and the
7 responses to those objections, are documented in Supplemental Documentation J.

8
9 The AOC prescriptions were applied to known values and common prescriptions from
10 the previous FMP were carried forward where possible. New prescriptions were
11 created based on new direction in the FMPM 2020, forest management guides, and
12 new values found on the forest. Operational prescriptions can be one of the following or
13 in combination:

- 14
15 • Reserve – An operational prescription for an area of concern where operations
16 are prohibited (or specific operations are prohibited); and/or
- 17 • Modified – modified harvest, renewal and tending operations where prescriptions
18 have been developed to protect or manage specific natural resource features,
19 land uses or values. Modified AOCs may allow regular operations with
20 conditions (e.g. timing, equipment), or unique prescriptions to protect or manage
21 specific natural resource features, land uses or values.

22
23 For any unmapped or incorrectly mapped value that is encountered during pre-harvest
24 inspections or during actual forest operations (e.g. intermittent or permanent stream,
25 nesting site, etc.), Miisun will report these to the NDMNRF in accordance with the
26 *Forest Information Manual* (FIM). Prompt response by company and NDMNRF in
27 accordance to FIM will be required to ensure operations can continue appropriately as
28 per new values. The value must be confirmed in consultation with the NDMNRF to
29 ensure that the appropriate prescription is applied. An amendment may not be required,
30 provided that the appropriate AOC prescription associated with the same value already
31 exists, and any necessary conditions on the location and /or construction or the crossing
32 are followed.

33
34 Shoreline reserves are taken from the high water mark (high watermark is defined as
35 the beginning of woody vegetation; rock and un-treed bog does not necessarily define
36 beginning of high water mark) based on slope and were derived by the company using
37 slope based raster's generated from digital elevation models. When mapping cut-to-
38 shore harvest $\geq 50\%$ of the area of the water quality AOC (based on delineation of the
39 AOC around the entire water feature, both inside and outside the harvest area)
40 associated with small lakes, HPS ponds, and MPS ponds, $\geq 75\%$ of the area of the AOC

1 associated with medium lakes, and $\geq 90\%$ of the area of the AOC associated with large
2 lakes will be retained. Shoreline reserves are then confirmed in the field during block
3 layout. Company planners, in conjunction with interested tourist outfitters or the public,
4 applied increased aesthetic reserves on some lakes. Tourism reserves applied to
5 minimize the visual impact of a cut-over will not guarantee cut overs will not be seen
6 from all parts of the lake but will mitigate the impact. There are some known areas that
7 aesthetic reserves applied will not conceal the cut-over totally from all parts of the lake.
8 Although these tourism aesthetic reserve areas are known to not fully conceal the
9 cutover in certain areas, there was agreement or understanding amongst the planning
10 team and the stakeholder(s) during RSA discussions/negotiations on its application
11 despite its shortcomings.

12
13 Bird stick nests were identified from past LIO information and from air inspections or
14 recent identification of nests. Where planned operations fall within the zone of concern
15 for eagles, ospreys, herons and other stick nests, a prescription has been prepared for
16 each species and other nests found in Table FMP-11. The NDMNRF conducts values
17 flights or ground surveys on a regular basis to inspect areas to confirm or identify values
18 associated with scheduled operations.

19
20 Any operational prescription or condition for an area of concern that differs from the
21 specific direction or recommendation (standards or guidelines) in a forest management
22 guide is identified in Table FMP-11 as an “exception”. The monitoring program for
23 exceptions would be described in Section 4.7.2 and detailed in Supplementary
24 Documentation F. A list of exceptions would also be referenced in the NDMNRF District
25 Manager’s certification and the NDMNRF regional resource manager’s certification and
26 recommendation of the forest management plan for approval (FMPM Figure B-2).
27 However, there are no exceptions noted in this FMP.

28 29 **4.2.1.1 Tourism Values and Resource Stewardship Agreements (RSAs)**

30
31 The *Tourism and Forest Industry Memorandum of Understanding (MOU)* is an
32 agreement between the government, the tourism industry and the forest industry on the
33 development of Resource Stewardship Agreements (RSAs) and related matters. As per
34 this MOU, this FMP has been prepared in accordance with the company’s commitment
35 to maintain the viability of the tourism industry, by protecting tourism values in the forest
36 management planning process through the application of the *Management Guidelines*
37 *for Forestry and Resource-Based Tourism*, and the use of Resource Stewardship
38 Agreements as one method of protecting and sustaining these values.

39

1 A Resource Stewardship Agreement is an agreement negotiated between two legal
2 entities: a Resource-Based Tourism Establishment (RBTE) as determined by the
3 Ministry of Heritage, Sport, Tourism, and Culture Industries; and the Sustainable Forest
4 Licensee (Miitigoog). Essentially, the parties agree, through negotiations of an RSA, to
5 apply forest management operational prescriptions to protect specific tourism values
6 and roads planning and/or related conditions on new and existing roads that affect
7 forest management that will be approved by the NDMNRF and included in the FMP
8 under the *Crown Forest Sustainability Act*. The RSA may also include other provisions
9 the parties agree to that are not part of the FMP. The terms of any RSA do not bind or
10 limit the government's right to make land use decisions for Crown land in Ontario, nor
11 do they abrogate any First Nations or Metis treaty rights.

12
13 The Ministry of Heritage, Sport, Tourism, and Culture Industries identified 85 Resource
14 Based Tourism Establishments (RBTEs) associated with the Kenora Forest. During
15 Stage 1 of the planning process all 85 resource-based tourist outfitters, and another 11
16 stakeholders with previously identified interest, were contacted to provide the
17 opportunity to develop a Resource Stewardship Agreement (RSA)(96 letters sent). The
18 three (3) operators that expressed interest in additional discussions were contacted
19 during Stage 2 of the planning process. All three operators opted for area of concern
20 planning in Stage Three of plan production rather than formal RSAs. Miisun has met
21 with each party on several occasions throughout the planning process, to discuss
22 concerns with noise, access and aesthetics to preserve the identified tourism values.
23 Identified concerns have been addressed through areas of concern (Table FMP-11)
24 planning to the satisfaction of RBTOs.

25
26 All the tourism areas of concern prescriptions have been developed within the context of
27 negotiating Resource Stewardship Agreements and followed the direction and
28 recommendations as provided in the *Management Guidelines for Forestry and*
29 *Resource-Based Tourism*. All negotiated areas of concern are included in the Area of
30 Concern Planning Supplementary Documentation I.

31
32 The Company has met in person or through email or telephone with other parties
33 interested and/or not interested in an RSA on several occasions throughout the
34 planning process. Main discussion was concerns with noise, access and view
35 aesthetics. These concerns have been addressed through the location of allocations,
36 AOC planning and Road Use Strategy planning to the satisfaction of these interest
37 groups.

38

4.2.1.2 AOC Prescriptions for Cultural Heritage Values

Registered cultural heritage values receive protection during forest management planning. Cultural heritage planning is undertaken for areas selected for operations as a means of protecting both known values, and locations where values may reasonably be expected to occur. Archaeological Potential Areas (APAs) (Table FMP-11, AOC A01) were identified using a computer model (Heritage Assessment Tool), and were refined by the planning team. The proposed prescription is consistent with the *Forest Management Guide for Cultural Heritage Values* (MNR, 2007). Generally, these areas are located in areas with other values, and are protected by a minimum 30-90 metre sloped-based water quality reserve, however, they are identified separately on the maps and modified harvest portions may extend beyond the water quality reserve as identified with the use of AOC A01.

This FMP contains AOC prescriptions for cultural heritage values identified in LIO (AOC A02) as well as AOC prescriptions for other values that may be associated with the same geographic area, such as riparian areas. When registered sites are located in harvest areas, they are often protected in areas with other values. Cultural heritage values are considered sensitive information and are not specifically identified on the map.

Efforts were made to determine if there were any known culture and heritage sites by asking each of the affected Indigenous communities. A total of 607 registered sites are known on the Kenora Forest. Should discovery of a site occur, direction in the Culture Heritage Guide would be followed. Directions include: operations must immediately stop work and local district NDMNR must be contacted as per the *Forest Information Manual*.

The value class of the discovery will determine who of the following will be contacted: Ministry of Heritage, Sport, Tourism, and Culture Industries staff, the local First Nation or Métis community, Registrar of Cemeteries, and/or the provincial cultural heritage specialist. When the class of cultural heritage value is established, where required, an appropriate AOC prescription will be incorporated into the FMP through an amendment.

As per the Culture Heritage guide, 2007, if human remains are discovered, operations at the site must stop and suspended immediately. Contact will be made with NDMNR district staff, the local or Ontario Provincial Police, and the Registrar of the Cemeteries Regulation Section of the Ministry of Consumer and Business Services at (416) 326-8393 as soon as possible. The police will investigate the report to determine if the human remains are of forensic interest or represent a burial site as defined by the

1 *Cemeteries Act*. All involved parties must act to safeguard the location until the police
2 attend the site, and to limit media contact or display. MNRFs provincial cultural heritage
3 specialist can provide a list of best practices described in the *Cemeteries Act* to help
4 involved parties understand their responsibilities. In addition, if the protection measures
5 for an area of archaeological potential are not complied with, operations must
6 immediately cease within the area of concern, and a Stage 2 archaeological
7 assessment per Ministry of Heritage, Sport, Tourism, and Culture Industries' current
8 standards and guidelines for consultant archaeologists shall occur.

9

10

11 **4.2.1.3 Operational Prescriptions and Conditions for Areas of Concern** 12 **Information Products**

13

14 The spatial locations of areas of concern are included in the forest management plan in
15 the digital feature classes of electronic information to be viewed with the planned
16 harvest layer of information. The (a) area of concern identifier, and (b) the area of
17 concern type are identified. The spatial location of the area of concern when cross
18 referenced with the operation prescription for the area of concern (Table FMP-11)
19 identifies the operational prescriptions and conditions for harvest, renewal and tending
20 to be applied to the specific AOC.

21

22 For bridging areas (harvest originally approved in the 2012-2022 FMP), the appropriate
23 AOC prescription and conditions from this 2022-2032 FMP Table FMP-11 have been
24 applied.

25

26 There is no second-pass harvest planned in this FMP.

4.2.2 Prescriptions for Harvest, Renewal and Tending Areas

Prescriptions for harvest, renewal and tending operations are discussed in the following sub-sections:

Section 4.2.2.1 Silvicultural Ground Rules

Section 4.2.2.2 Conditions on Regular Operations

Digital spatial information products for harvest, renewal and tending operations that are included with the FMP will serve as the stand list for forest operations. The information product for the harvest, renewal and tending areas is the SGR field in the operational planning inventory (OPI) feature class and linked information for the planned harvest is in the PHR feature class.

4.2.2.1 *Silvicultural Ground Rules*

Silvicultural Ground Rules (SGRs) are defined as “Specifications, standards, and other instructions, that direct silvicultural activities on a management unit during the period of the forest management plan” (FMPM 2020). The description and development of the SGRs are discussed in FMP text Section 3.3, and the SGRs are presented in Table FMP-4. The SGRs were prepared using a combination of silvicultural guides, technical information, scientific publications and local/field experience of company and NDMNRF staff, as well as advice from regional science advisors. The SGRs for the harvest, renewal, and tending operations will serve as the prescriptions for operations, including naturally depleted areas that are salvaged, for the 10-year period of the forest management plan.

An analysis of past silvicultural activities was conducted by a Registered Professional Forester and was considered in the development of Silvicultural Ground Rules (Table FMP-4). These Silvicultural Ground Rules were then used to reflect the appropriate silvicultural options in the strategic modelling (SFMM Base Model, see Supplementary Documentation B – Analysis Package).

For each forest unit and future silvicultural stratum (yield productivity), the most common silvicultural treatment package in Table FMP-4 is considered to be the package of treatments most likely to be conducted. It is recognized that individual treatments within a silvicultural treatment package or alternate identified acceptable treatments are implemented in succession, and therefore it may take longer than the 10-year plan period for an entire silvicultural treatment package to be implemented. The preliminary SGR represents the best estimate of the operations at the time of FMP preparation, and will not limit the selection of any of the acceptable alternative silvicultural treatments in the SGRs at the time of implementation of operations.

1
2 There are no treatments included in Silvicultural Ground Rules in Table FMP-4 that are
3 not recommended in the applicable silvicultural guide.

4
5 The most common SGRs projected to be used are based on grouping plan forest unit
6 areas with the reasonable expectation to produce the future forest unit and yield curve
7 combination. The future forest unit and yield curve combination information in Table 42
8 reflects the most common SGRs based in the strategically modelled renewal transition
9 frequency and the 2012-2022 FMP default renewal operations expected to be most
10 commonly used when associated with the current originating (harvested) forest unit.

11
12 Table FMP-4 includes renewal and forest development information for native tree
13 species to the Kenora Forest. Exotic tree species, not naturally found on the forest, will
14 not be planted or otherwise encouraged through renewal efforts.

15
16 Occasionally, previously depleted areas require follow-up treatments to enhance
17 regeneration stocking. Renewal treatments may also be applied to old road landings,
18 areas containing slash piles that have been burned and require planting or seeding, or
19 applied on sites that are generally successfully established, but have inadequately
20 stocked patches.

21
22 **Table 42 Most Common SGR and Renewal Treatment by Forest Unit**

Harvested Forest Unit	Most common SGR (FMP-4) and Description	
BFM	PJD-LOW	Mechanical site preparation, aerial seeding, tending
CMX	CMX-LOW	Natural seeding
HMX	POD-MED	Natural coppice or seed
HRD	POD-HIGH	Natural coppice or seed
PJD	PJD-LOW	Mechanical site preparation, aerial seeding, tending
PJM	PJD-LOW	Mechanical site preparation, aerial seeding, tending
POD	POD-HIGH	Natural coppice or seed
PRW	PRW-LOW	Mechanical site preparation, planting, tending
SBD	PJM-LOW	Mechanical site preparation, aerial seeding, tending
SBL	SBL-LOW	Natural seeding
SBM	PJD-MED	Mechanical site preparation, aerial seeding, tending

24
25 Note Forest Productivity Class (YIELD) Definitions and Codes:

26 LOW = Managed, low productivity stands

27 MED = Managed, moderate productivity stands

28 HIGH = Managed, higher productivity stands

1 As harvested areas are regenerated, operational roads within harvest blocks may also
2 be regenerated in accordance to the appropriate block SGR(s), and the road use
3 management strategy for the road or road network. See Section 4.5.2 for reference to
4 road use management strategies, and Supp. Doc. H for specific conditions for road use
5 management strategies. Where site preparation is part of the applied SGR to a block or
6 portion of a block, it will cross ungravelled roads, or other low quality roads, where they
7 are not needed for planting access. The site prepared areas will be planted or seeded
8 within the remaining block. Those roads that cannot be site prepared will be planted
9 tightly to the roads edge where possible or, if the applicable SGR includes natural
10 regeneration, natural ingress or coppice regeneration will be promoted.

11
12 There are no silviculture trial areas planned for implementation in this FMP.

13
14 The information products (i.e. PHR & IMP layers) for harvest, renewal and tending
15 operations will serve as the stand listing. Silviculture Ground Rules are found in the
16 field “SGR” in the operational planning inventory (OPI) feature class.

17
18 The only prescribed burns planned for this 10-year period of the FMP are for the
19 burning of slash piles on harvested areas that occur annually on the Kenora Forest.
20 Select SGR’s permit the use of prescribed burns as part of the acceptable alternative
21 treatments for site preparation and may be implemented as part of an applied SGR.

22
23 Occasionally forest stands degrade through natural succession or natural disturbances,
24 such as jack pine budworm insect infestation. Where appropriate, these areas will be
25 evaluated on a case by case basis to determine suitability and appropriateness for
26 prescribed burning. These situations will be promoted where the treatment is expected
27 to create an improved condition of future forest health. Any such case will be amended
28 into the plan. If such areas are identified, they would be projected to be “Allow Fire”
29 areas as per the Modified Fire Response Plan in Section 4.8.3 of this FMP, or added as
30 prescribed burn areas in Table FMP-17 (and associated text Section 4.4.1).

31
32 The application of herbicide as a tending operation is proposed in this plan, with the
33 location of eligible areas identified on the digital spatial layers for renewal and tending.
34 While chemical tending will typically be conducted through ground application, aerial
35 tending may also occur as identified in SGRs. The identification of areas for chemical
36 tending will be identified yearly in the Annual Work Schedule. Approvals by the Ministry
37 of the Environment, Conservation and Parks (MECP) will be required prior to the
38 application of registered herbicides on the Kenora Forest. Areas previously harvested
39 in past FMPs, as well as areas requiring supplemental or re-treatment may be identified
40 through operational monitoring or through the monitoring program for success of

1 silvicultural and are eligible for renewal treatment and tending. These areas may not
2 have been identified at the time of writing the FMP and do not require an FMP
3 amendment to receive renewal or tending treatments and may be treated as per the
4 applied or applicable SGR.
5

6 **4.2.2.2 Conditions on Regular Operations**

7

8 This section of the plan documents conditions on regular operations (CROs) that apply
9 to important ecological features. Important ecological features are a subset of natural
10 resource attributes that are normally common and widespread, are often transitory, are
11 rarely identified in advance of operations, and typically require minimal modifications to
12 regular operations (e.g., Conditions on Regular Operations) to ensure they are
13 maintained or protected.
14

15 These Conditions on Regular Operations have been developed through application of
16 the *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales*
17 (MNRF, 2010), relating to species at risk or in accordance with existing agreements.
18

19 Conditions on regular operations (CROs) apply to all harvest, renewal and tending
20 operations. Conditions on roads, landings and forestry aggregate pits are documented
21 in Table FMP-11 parts B, C and D. Below, Table 43 Conditions on Regular Operations
22 documents the conditions that have been developed mainly through the application of
23 the *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales*
24 (MNRF, 2010) and conditions developed by the planning team.
25

26 Where these conditions on regular operations apply to a specific management zone, the
27 text identifies the management zone where the condition is applied. For example,
28 Moose Emphasis Areas are such management zones and the associated CROs for
29 these zones are included in the following table.
30

31 Known S1, S2 or S3 Natural Heritage Information Centre vegetation communities or
32 other uncommon vegetation communities which are likely to occur in areas of planned
33 operations were identified. During Stage Three of plan development, one area of “Bur
34 Oak Basic Treed Rock Barren Type” was identified as overlapping with one planned
35 harvest block. A Condition on Regular Operations was developed for Incidental Bur
36 Oak to direct the retention of bur oak encountered during regular operations (Table 43).
37 If any additional S1, S2 or S3 Natural Heritage Information Centre vegetation
38 communities or other uncommon vegetation communities are identified by NDMNRF (or
39 S1 - S3 species observations/occurrences are reported) which are likely to occur in
40 areas of planned operations in the future, the SFL will consult with NDMNRF Regional

1 Planning Biologists and/or district Management Biologists to develop CROs as required
2 by the Stand and Site Guide.

3

4 There are no conditions on regular operations for an important ecological feature that
5 differs from the specific direction or recommendation (standards or guidelines) in a
6 forest management guide that are considered an exception.

7

8 Some minor variation in the planned harvest areas may result from operational block
9 layout in the field. The SFL plans to harvest to the intent of the boundary. Minor
10 adjustments to harvest block boundaries may need to be implemented during block
11 layout, providing that the change in boundary does not infringe on an area of concern.
12 This allowance for minor variation during block layout will result in fewer amendments
13 for minor deviations, better wood utilization and better protection of values. The intent of
14 the practice is to allow harvest to occur in areas where it was intended to occur. Over
15 time, the minor additions and subtractions to block boundaries are expected to overall
16 balance out with no net difference in harvest allocations areas. Some examples where
17 this harvest block layout variation may occur are: harvest boundaries moved to actual
18 road location, mapped features such as swamp boundaries are observed to be different
19 in the field than as mapped, harvest boundary moved to the edge of a past cutover so
20 as to not leave a fringe strip, shifting between GPS projections, etc.

21

22 Adjustments that are less than 30 metres outside a block boundary or additional
23 individual areas less than or equal to 0.5 hectares will be identified and tracked by the
24 SFL. Adjustments that exceed either of these parameters will require additional review
25 by NDMNRF district prior to the start of harvest activities. The NDMNRF will assess if
26 the proposed change remains consistent with the intent of the boundary and if it is still
27 acceptable, or if it is considered a significant change. Significant changes to block
28 boundaries will require submission of an amendment to NDMNRF for approval.

Table 43 Conditions on Regular Operations (CROs)**Alphabetical List of CROs for Important Ecological Features:**

- 4 Balsam Fir – Unmerchantable
- 5 Biofibre Harvest
- 6 Canoe-Grade White Birch and Cedar Trees
- 7 Dens of Furbearing Mammals – Transitory Features (see Table FMP-11 for AOCs for known dens)
- 8 Dens of Furbearing Mammals – Enduring Features
- 9 Downed Woody Material
- 10 Erosion
- 11 Hydrological Impacts
- 12 Incidental Bur Oak
- 13 Large, Landscape Patches – Deer Emphasis Areas (DEAs)
- 14 Large, Landscape Patches – Moose Emphasis Areas (MEAs)
- 15 Loss of Productive Land
- 16 Marten Boxes (Traps)
- 17 Mining Claims and Leases
- 18 Nests – Songbirds
- 19 Nests – Occupied Ground Nests
- 20 Nests – Unoccupied nests/communal roosts in cavities previously used by American Kestrel, Barred Owl, Boreal Owl, Eastern
21 Screech-Owl, Great Horned Owl, Northern Hawk Owl, Northern Saw-Whet Owl or Chimney Swift
- 22 Nests – Unoccupied stick nests built or used by Barred Owl, Broad-Winged Hawk, Common Raven, Cooper’s Hawk, Great
23 Horned Owl, Long-Eared Owl, Merlin, Red-Tailed Hawk or Sharp-Shinned Hawk
- 24 Nests – Inactive Nests of Great Gray Owl, Northern Goshawk or Red-Shouldered Hawk
- 25 Nests – Unidentified (Unknown) Stick Nests
- 26 Nutrient Loss – on Shallow Soil Sites
- 27 Red Pine and White Pine Aesthetics – along Rush Bay Road, Clytie Bay Road, Woodchuck Bay Road and Cameron Drive
- 28 Red Pine and White Pine, Incidental - within Wabaseemoong Stewardship Area
- 29 Residual Forest – Mapped
- 30 Residual Forest – Unmapped
- 31 Rich Lowland Hardwood-Dominated Forest (Black Ash)
- 32 Rutting & Compaction
- 33 Salvage Harvest
- 34 Wetlands – mapped permanent, non-forest
- 35 Wildlife Trees – Clearcut Silvicultural System
- 36 Woodland Pools



Description	Source
<p>BALSAM FIR - UNMERCHANTABLE</p> <ul style="list-style-type: none"> • Applies only in areas <u>outside</u> of Moose Emphasis Areas / Deer Emphasis Areas • Non-merchantable balsam fir encountered during harvest and site preparation operations that will impact regeneration 	<p>Planning Team</p>
<p><u>DIRECTION:</u> Harvest operations and silviculture strategies should limit balsam fir regeneration. Where reasonable to do so the following strategies should be applied:</p> <ul style="list-style-type: none"> • During harvest operations, operators should knock down, fell, and or trample non-merchantable balsam fir and balsam fir regeneration. • Trample balsam fir during site preparation in order to support renewal activities and desired future forest condition. • When using the CLAAG harvest system, avoid leaving advanced balsam fir regen. Fell or knock down advance balsam regeneration within the leave areas. • When stand tending with brush saws, select against balsam fir when possible. 	
Description	Source
<p>BIOFIBRE HARVEST</p> <ul style="list-style-type: none"> • Forest biofibre refers to forest resources from Crown lands that are not being utilized for other forest products and that are made available under an approved FMP, forest biofibre is comprised of: <ol style="list-style-type: none"> 1. Unmerchantable timber such as undersized wood, cull trees or portions of trees, 2. Individual trees and stands of trees that are merchantable, and 3. Trees that may be salvaged as a result of a natural disturbance. • Biofibre may be the primary (e.g., otherwise unmarketable stand of low-grade hardwoods) or secondary (e.g., undersized material after optimizing recovery of veneer and sawlog) product of a planned harvest operation. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 161</i></p>
<p><u>DIRECTION:</u> The following conditions apply equally to all planned harvest areas regardless of the product derived:</p> <ul style="list-style-type: none"> • Stumps and all below ground portions of a tree are not available for utilization as a forest product. Movement or removal associated with normal operations (construction of roads, landings, and skid trails; renewal and tending; slash piling; etc.), including incidental movement or removal during harvest operations, is permitted but will be minimized to that required for efficient operations. Removal for forest health purposes is permitted. • Organic matter that is not part of a harvested tree (including boles, branches, roots, bark, leaves, needles, debris, soil carbon, etc.) will remain on site; movement of such material for silvicultural purposes is permitted. 	



Description	Source
<p>CANOE-GRADE WHITE BIRCH and CEDAR TREES</p> <p>These suitable canoe-grade trees will be identified during operations as well as through Indigenous values collections. It is essential that the locations of these canoe-grade trees identified through operations be communicated to the closest Indigenous communities as soon as possible.</p>	<p>Planning Team</p>
<p>Direction:</p> <p>Suitable white birch:</p> <ul style="list-style-type: none"> • Trees are to be identified with flagging tape to avoid any damage to the bark. • Mature white birch trees with a minimum diameter at breast height of 22 inches (> 55 cm). • Bark thickness of at least ¼ inch (0.6 cm). • Straight, healthy bole approximately 14 to 18 feet (4.5 to 6 m) long. • Free of limbs, and relatively few knots. <p>Suitable white cedar:</p> <ul style="list-style-type: none"> • Tree must be mature and healthy with a minimum diameter at breast height of 18 to 20 inches (45 – 50 cm). • The bole must be as straight (no crook or sweep) and straight grained (no twist) as possible, and relatively free of any large limbs up to a height of 10 to 12 feet (3 to 4 m). <p>Note: Potentially, there are many trees meeting these criteria. Community members can review the Annual Work Schedule (AWS) each year prior to approval. Community members are encouraged to identify geographic areas of potential interest for cedar (including approved harvest blocks) at this time. The SFL will also advise community members of suitable trees that meet these criteria when discovered.</p> <p>Operational Considerations:</p> <ul style="list-style-type: none"> • Harvest and access operations will be conducted in a manner that will not damage the canoe-grade tree including the root system. <p>When an identified canoe-grade tree has been removed (harvested by a canoe builder with a community), this Condition on Regular Operations no longer applies to that area.</p>	

1



Description	Source
<p>DENS OF FURBEARING MAMMALS – TRANSITORY FEATURES</p> <ul style="list-style-type: none"> Dens in tree cavities, hollow logs, brush piles, or other transitory features that are known to be occupied by furbearing mammals (other than red foxes, skunks, wolves, and wolverines) and that are encountered during operations. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 98</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> Known occupied dens encountered during operations will not be destroyed (complete or partial damage of the den structure or its contents i.e. adults or young) To minimize disturbance of furbearers occupying known dens no operations are permitted within 3 m of den entrance. This includes <ul style="list-style-type: none"> Retaining trees within 3 m of dens known to be occupied (patch may be counted as a clump of wildlife trees.) Avoid felling trees into the area within 3 m of dens known to be occupied. Avoid heavy equipment travel within 3 m of dens known to be occupied Notify District NDMNRF to provide updated wildlife values information. 	

1

Description	Source
<p>DENS OF FURBEARING MAMMALS – ENDURING FEATURES</p> <ul style="list-style-type: none"> Dens in caves, excavated burrows, under large piles of coarse woody material, or other enduring features that are known to have been occupied by furbearing mammals (other than red foxes, skunks, wolves, and wolverines) at least once within the past 5 years. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 97</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> Direction applies to dens known before or found during operations. Harvest, renewal, and tending operations are not permitted within 20m of den entrance. New roads, landing and aggregate pits are not permitted within 20m of the den entrance. Notify District NDMNRF to provide updated wildlife values information. 	

2



Description	Source
<p>DOWNED WOODY MATERIAL</p> <ul style="list-style-type: none"> • Material that was traditionally referred to as downed woody debris. • Downed woody material (DWM) refers to wood above the soil and on the ground: coarse woody material refers to sound and rotting branches, boles, logs, and stumps, generally ≥ 7.5 cm in diameter at the small end; fine woody material refers to stems and twigs generally < 7.5 cm in diameter at the small end. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 24</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Stems retained as wildlife trees that fall down, or are felled for worker safety reasons, become downed woody material and will be left on site; moving such trees for silvicultural purposes is permitted. • Downed trees (or pieces of trees) present prior to harvest will be left on site. Moving such trees for silviculture purposes is permitted; <ul style="list-style-type: none"> ○ Where windstorms or other natural events have caused damage to stands, trees leaning and downed by the disturbance, which normally would have been available for harvest, may be harvested and utilized. • Where compatible with logging methods, unmerchantable logs, or portions of logs, should be left on site, at the stump. • Dead trees present prior to harvest, including those lowered to the ground for safety considerations should be left on site (only safe dead trees will remain standing). 	

1



Description	Source
<p>EROSION</p> <ul style="list-style-type: none"> • Erosion can be defined as the overland movement of soil particles by water, wind or gravity. • Erosion can be the result of either natural causes or human site alterations. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 152-153</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Skid trails on moderate to steep slopes should be avoided where erodible soil types are present. • Decommission main skid trails constructed on steep slopes by installing water bars, diversion ditches, straw bales, etc. at appropriate intervals or critical landform junctures to filter runoff water through surrounding vegetation. • Minimize mineral soil exposure to that required for efficient operations and effective silviculture (consistent with SGR for the site). • Mitigate or rehabilitate areas of significant erosion that are transporting, or are likely to transport, sediment into a water feature. • Forest operations will not be conducted on extremely steep slopes. • Green wildlife trees, organic matter and surface vegetation will be preserved on steep slopes. • Stable slopes will be maintained on ditch lines, road fills and cuts. • Slopes and banks will be reinforced where there is potential for erosion (re-vegetate or use logging debris). • Site disturbance associated with forest operations will be minimized on shallow soil sites. • Skid trails will be kept to a minimum, with an emphasis on the protection of desirable advanced regeneration. • Post-harvest prescriptions and renewal efforts will be carried out as quickly as possible on shallow soil sites to encourage full site occupancy. This will minimize problems with erosion and loss of nutrients. • Heavy mechanical site preparation (i.e. heavy drags or continuous disc trenching with down pressure) will not be used on shallow soil sites 	

1



Description	Source
<p>HYDROLOGICAL IMPACTS</p> <ul style="list-style-type: none"> Hydrological impacts can be described as changes in the potential rates and/or patterns of surface and shallow groundwater flow through various parts of the forest ecosystem. <p>NOTE: The natural “watering up” process associated with the removal of forest cover is not considered a hydrological disruption</p>	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 157-158</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> Based on local conditions, explore reasonable alternatives to crossing organic and saturated mineral soil during the frost-free period. Train field staff, especially equipment operators, in the recognition and significance of disruption of hydrological function. Where possible, locate roads and landings so skidding and forwarding does not have to cross natural drainage patterns. To maintain drainage patterns and minimize the potential for sediment-laden roadbed or ditch run-off to reach a water feature, use cross drainage culverts whenever a road crosses a gully or other natural drainage feature Based on local conditions, take reasonable precautions to ensure harvest, renewal and tending operations will not result in disturbance of the forest floor that impedes, accelerates, or diverts water movement within recognizable ephemeral streams, springs, seeps, and other areas of groundwater discharge connected to lakes, ponds, rivers, or streams. Minimize the potential for hydrological disruption when crossings during the frost-free period cannot be avoided (See conditions under Rutting and Compaction). On very dry sites, careful logging practices that retain juvenile trees, shrubs, advanced regeneration, and downed woody material can reduce overall ground temperature and reduce excess drying. Regenerate susceptible sites as quickly as possible to restore transpiration and moderate hydrological changes. If recognizable ephemeral streams, springs, seeps, and other areas of groundwater discharge that are connected to lakes, ponds, rivers, or streams, or small unmapped wetlands must be crossed, use mitigative techniques and practices to minimize impacts to hydrologic flow and wetland function. Natural water movements will not be impeded, accelerated, or diverted. Identify areas of concentrated surface water flow and prevent blockage through appropriate use of cross drainage culverts. Some of these locations may best be determined during the spring when ponding is evident at unpredicted locations along a new road. 	

1
2



Description	Source
<p>INCIDENTAL BUR OAK</p> <ul style="list-style-type: none"> • Areas that contain bur oak (Natural Heritage Information Centre records) or as identified through discussions with Kenora District NDMNRF • Areas containing incidental bur oak (> 10 stems per hectare) 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 13.</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Areas identified for harvest which contain bur oak in concentrations of at least 10 per hectare, no harvest of the bur oak will occur unless necessary for road, landing or aggregate pit construction. 	

1

Description	Source
<p>LARGE, LANDSCAPE PATCHES – Deer Emphasis Areas (DEAs)</p> <p>In this forest management plan, there is one Deer Emphasis Area in which this direction applies:</p>	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 26-29</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • If practical and feasible, the block will be scheduled for harvest in the winter season • All bur oak will be retained except where required to be cleared for road right-of-way • Operations will preferentially retain mature white spruce, white pine and cedar as wildlife trees, priority given to retaining small clumps of trees, as opposed to individual trees, if they occur. <p>All blocks were reviewed by the District Biologist and direction was provided on location of residual patches and patch preference, where required. Comments were provided on the remaining blocks and will be used for placement of residual forest patches. The location of the DEA is portrayed on the MU644_2022_FMP_MAP_Index_XX map.</p>	

2



Description	Source
<p>LARGE, LANDSCAPE PATCHES - Moose Emphasis Areas (MEAs) In this forest management plan, there are four Moose Emphasis Areas in which this direction applies:</p>	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 29-33</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Renewal and tending practices will have regard for the availability and abundance of moose browse over the short and long term, <ul style="list-style-type: none"> ○ Aerial application of herbicide will be limited within the MEA to areas required to meet specific landscape or MEA objectives ○ A maximum of 500 hectares per year will be sprayed within the MEA. • Application of herbicide will be planned to allow for some browse in all harvest blocks near edges and along moose travel corridors (such as between summer thermal patches and MAFA's or between patches of winter thermal cover) 	

1

Description	Source
<p>LOSS OF PRODUCTIVE LAND</p> <ul style="list-style-type: none"> • Loss of productive land can be described as the conversion of previously productive forest land to a long-term or permanently non-forested condition as a result of forest management operations. Some loss of productive land through the conversion to other land types (e.g., permanent roads) is inevitable 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 156-157</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Sites will normally be regenerated within three years of harvest and regenerated according to the tolerances of the appropriate SGR. • Minimize the amount of area being converted to non-forest (e.g., roads and landings) to that which is required for efficient operations. • Placement of landings should consider existing non-productive land and the creation of landings will be minimized. • Exposure of bedrock should be minimized. • Ponding created by operations and roads will be mitigated where possible. <p>Slash and Chip Debris Piles:</p> <ul style="list-style-type: none"> • Slash and chip debris piles will not accumulate through time or result in a permanent loss of production land. • The productive land base will be recovered from new slash and chip piles (and existing piles as noted below) and these areas will be renewed except where they were not part of the productive land base originally (e.g. rock outcrops). • Operations will be conducted in a manner to prevent or minimize the creation of chip debris piles where chippers are used and 	



full tree and/or tree-length logging is identified as an acceptable logging method in the SGRs.

- Unutilized woody material, which accumulates at roadside and is expected to remain unutilized, will be piled for burning, redistributed in the cutover, or otherwise treated to increase the area available for regeneration.
- Avoid piling unutilized fibre on productive non-forest cover types (e.g., brush and wet areas).
- Pile unutilized fibre on non-productive rock or use in the production and/or reclamation of roadways where possible
- For any slash and/or chipper debris piles that are created the following will occur:
 - Operations will be conducted to reduce the impact of slash and chip debris and recover the productive land base from these areas (e.g. biofibre harvest, slash pile burning, spreading of chipper debris, site preparation, planting/seeding).
 - Slash/chip treatment operations are planned to be completed while equipment is still within the harvest area with renewal planned to be completed within one year of slash/chip pile treatment. Slash/chip treatment operations will be completed no later than two years following the completion of harvest operations and renewal will be completed no later than three years following the completion of harvest operations.
 - The most applicable SGR will be applied to renew the area, based on the specific site conditions of areas formerly occupied by slash and/or chip piles, and the renewal including regeneration treatments should complement the treatments on the adjacent treated areas.
 - Existing slash and chip piles will normally be treated and regenerated as noted above within three years of the completion of harvest operations.
 - Older existing slash and chip piles will be reviewed and where practical treated and regenerated as noted above using the most applicable SGR unless a different rehabilitation strategy including regeneration standards have been documented in Section 4.2.2.1 Silvicultural Ground Rules.
 - The AWS will identify the location of slash and chipper debris piles scheduled for treatment, the operations to be conducted, and the scheduled regeneration treatments.
 - The AWS will identify the inspection of slash and chip debris pile treatments and subsequent regeneration as a compliance priority and will indicate how the inspections will be completed.

Logging debris will be managed, except in extraordinary circumstances, in less than 3 years, using one or more of the following methods to achieve the requirements:

Chipper Debris

- Suitable chipping pads and landings will be selected prior to the commencement of operations
- Redistributing chipper debris across the cut over resulting in equal to or less than 20 cm to mineral soil
- Mechanical site preparation through chipper pads will be done with the intent of exposing down to mineral soil for follow-up regeneration treatment
- Use chipper debris as fill for road construction, landscape material for aggregate site rehabilitation, and road bank stabilization



as appropriate

- Use of chipper debris to prevent rutting and compaction
- Pile chip debris for burning (approved prescribed burn application required prior to piling)
- Renew area following most appropriate SGR.

Roundwood Slash

- Slash piles will be aerated (or “fluffed”) and piled for burning. Soil mixing will be minimized during the piling process
- Pushed or fluffed piles will be in a location that is suitable for fall burning (away from wet ponds, drainage, or standing timber) and free of soil/foreign materials.
- Roundwood slash will not be placed on or near chipper pads so that burning operations will not be hampered
- Use slash for brush mats to prevent rutting or compaction when available
- Incorporate slash into road operational road sub-grades during construction where possible
- Use slash to create access restrictions, consistent with road use strategies
- Carry out prescribed burn plan
- Renew area following most appropriate SGR

Note: It is understood some of the above listed methods are dependent on weather, proximity to heavy equipment, and other factors. Although completion within three years is expected, the ability to complete these procedures within this time frame may not always be feasible. Reasonable efforts will be made to meet the conditions as above. In the event that unplanned circumstances arise, and debris management activities are not practical (unplanned loss of access, or new area of concern prescription implement), the following will apply:

- The location of the logging debris will be tracked
- A follow-up silvicultural assessment will be carried out and once the debris has undergone sufficient decomposition to permit a follow-up silviculture treatment and renewal. Existing regeneration success will be a consideration.

Description	Source
<p>MARTEN BOXES (TRAPS) Marten boxes (Traps) encountered during operations</p>	<p>Planning Team</p>
<p>DIRECTION:</p> <ul style="list-style-type: none"> • When Marten boxes (traps) are encountered, they are not to be disturbed. When encountered; <ul style="list-style-type: none"> ○ Flag the tree hosting the Marten box with brightly colored ribbon (not orange) (ribbon colour to be <u>different</u> than the colour used to designate harvest block boundaries or road right-of-way) ○ Stub the tree above the box. ○ Do not fall trees toward the marten box 	

1

Description	Source
<p>MINING CLAIMS AND LEASES</p> <ul style="list-style-type: none"> • Mining activity or equipment is encountered on mapped or unmapped claims and leases. • Claim monuments encountered during operations. 	<p><i>Mining Act., Surveyors Act.</i></p>
<p>DIRECTION:</p> <ul style="list-style-type: none"> • When mining claim post or monuments are encountered, they are not to be disturbed. <ul style="list-style-type: none"> ○ Flag Mining Claim post with brightly colored ribbon (ribbon colour to be <u>different</u> than the colour used to designate harvest block boundaries or road right-of-way) ○ Do not fall trees toward the claim marker/post. ○ Avoid disturbing the soil within 5 m of the mining claim post ○ Stub trees around claim post when encountered • Respect mining equipment and operations when encountered by; <ul style="list-style-type: none"> ○ When necessary contact the mining claim operator to identify and hazards of values that may be encountered during operations. This information is held with the NDMNRF. ○ Do not fall trees toward identified values. ○ Equipment should remain a tree length away from the identified values. 	

2



Description	Source
<p>NESTS – SONGBIRDS Nests of songbirds or other small birds containing eggs or young encountered during operations.</p>	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 89-90</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Known nests of songbirds or other small birds containing eggs or young encountered during operations will not be destroyed (destruction means complete or partial damage of the nest structure or its content i.e. attendant birds, eggs or young). • To minimize disturbance (incidental interference with breeding activities such as egg laying, incubation, brooding, or feeding of young) upon discovery of a nest belonging to a songbird or other small bird containing eggs, reasonable effort will be made to avoid harvest, renewal and tending operations within 20 m of known nests contain eggs. Specifically, effort will be made to: <ul style="list-style-type: none"> ○ Retain trees within 20 m of nest containing eggs (patch may be counted as a clump of wildlife trees) ○ Avoid felling trees into the area within 20 m of nests containing eggs. ○ Avoid heavy equipment travel within 20 m of nests containing eggs. • Notify District NDMNRF to provide updated wildlife values information. 	
Description	Source
<p>NESTS – OCCUPIED GROUND NESTS • Nests of waterfowl or grouse containing eggs encountered during operations</p>	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 89</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Nests of waterfowl, grouse, wild turkey or bank swallow containing eggs encountered during operations will not be destroyed (destruction means complete or partial damage of the nest structure or its content i.e. attendant birds, eggs or young). To minimize disturbance (incidental interference with breeding activities such as egg laying, incubation, brooding, or feeding of young) harvest, renewal and tending operations should be avoided within 10 m of nests containing eggs. This will include the following: <ul style="list-style-type: none"> ○ retaining trees within 10m (patch may be counted as a clump of wildlife trees), ○ not felling trees into the area within 10m, and ○ heavy equipment will not travel within 10m. • Notify District NDMNRF to provide updated wildlife values information. 	



1

Description	Source
<p>NESTS - UNOCCUPIED NESTS/COMMUNAL ROOSTS IN CAVITIES PREVIOUSLY USED BY AMERICAN KESTREL, BARRED OWL, BOREAL OWL, EASTERN SCREECH- OWL, GREAT HORNED OWL, NORTHERN HAWK OWL, NORTHERN SAW-WHET OWL OR CHIMNEY SWIFT</p> <ul style="list-style-type: none"> Unoccupied nests/ communal roosts in cavities known or suspected to have been used by the American kestrel, barred owl, boreal owl, eastern screech- owl, great horned owl, northern hawk owl, northern saw-whet owl, or chimney swift 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 86-87</i></p>
<p>If the nest is occupied and the species is confirmed, the appropriate CRO, CORLAP, or AOC will be adhered to.</p> <p>If the nest species cannot be confirmed, see <u>NESTS – UNIDENTIFIED (UNKNOWN) STICK NESTS</u> prescription further down this section.</p> <p>When the nest species is confirmed to be used but is unoccupied, the following direction will be used.</p> <p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> The tree used by the American kestrel, boreal owl, eastern screech-owl, northern hawk owl, or northern saw-whet owl will be retained as a wildlife tree if not a safety concern The tree used by the barred owl, great horned owl or the chimney swift will retain the nest/communal roost tree in an unharvested residual patch (≥20 m radius)(may be counted as residual forest). No timing restrictions on harvest, renewal, or tending operations around nests/ roosts. Notify District NDMNRF to provide updated wildlife values information. 	

2



Description	Source
<p>NESTS - UNOCCUPIED STICK NESTS BUILT OR USED BY BARRED OWL, BROAD-WINGED HAWK, COMMON RAVEN, COOPER’S HAWK, GREAT HORNED OWL, LONG-EARED OWL, MERLIN, RED-TAILED HAWK, OR SHARP-SHINNED HAWK</p> <ul style="list-style-type: none"> unoccupied nests known or suspected to have been built by barred owl, broad-winged hawk, common raven, Cooper’s hawk, great horned owl, long-eared owl, merlin, red-tailed hawk, or sharp-shinned hawk 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. P 84</i></p>
<p>If the nest is occupied and the species is confirmed, the appropriate CRO, CORLAP, or AOC will be adhered to.</p> <p>If the nest species cannot be confirmed, see <u>NESTS – UNIDENTIFIED (UNKNOWN) STICK NESTS</u> prescription further down this section.</p> <p>When the nest species is confirmed to be used but is unoccupied, the following direction will be used.</p> <p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> The nest tree used by the broad-winged hawk, merlin, sharp-shinned hawk, or an unknown nest <75 cm diameter will be retained as a wildlife tree if the nest is in good repair or the nest tree contains a fork. The nest tree of the Barred owl, Cooper’s hawk, common raven, great horned owl, long-eared owl, red-tailed hawk or an unknown large stick nest (≥75 cm diameter) will be retained in an unharvested residual patch (≥20 m radius) if the nest is in good repair (may be counted as residual forest). Otherwise, the nest tree will be retained as a wildlife tree. No timing restrictions on harvest, renewal or tending operations around nests. Notify District NDMNRF to provide updated wildlife values information. 	

1



Description	Source
<p>NESTS - INACTIVE NESTS OF GREAT GRAY OWL, NORTHERN GOSHAWK or RED-SHOULDERED HAWK</p> <ul style="list-style-type: none"> • Nests not known or suspected to have been occupied at least once within the past 5 years that are: <ul style="list-style-type: none"> ○ >400 m from a primary nest or; ○ <=400 m from a primary nest but in poor repair • Primary and alternate nests within nesting areas where all nests within the nesting area have been documented as unoccupied for ≥3 consecutive years. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. P 81</i></p>
<p>If the nest is occupied and the species is confirmed, the appropriate CRO, CORLAP, or AOC will be adhered to.</p> <p>If the nest species cannot be confirmed, see <u>NESTS – UNIDENTIFIED (UNKNOWN) STICK NESTS</u> prescription further down this section.</p> <p>When the nest species is confirmed to be used but is unoccupied, the following direction will be used.</p> <p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • If the nest is in good repair, harvest is not permitted within 20 m; the patch may be counted as residual forest. Otherwise, the nest tree only will be retained as a wildlife tree. • No timing restriction on harvest, renewal or tending operations around inactive nests. • Notify District NDMNRF to provide updated wildlife values information. 	

1



Description	Source
<p>NESTS – UNIDENTIFIED (UNKNOWN) STICK NESTS Stick nest encountered during operations is unoccupied, unidentifiable or unknown.</p>	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. P 84</i></p>

DIRECTION:

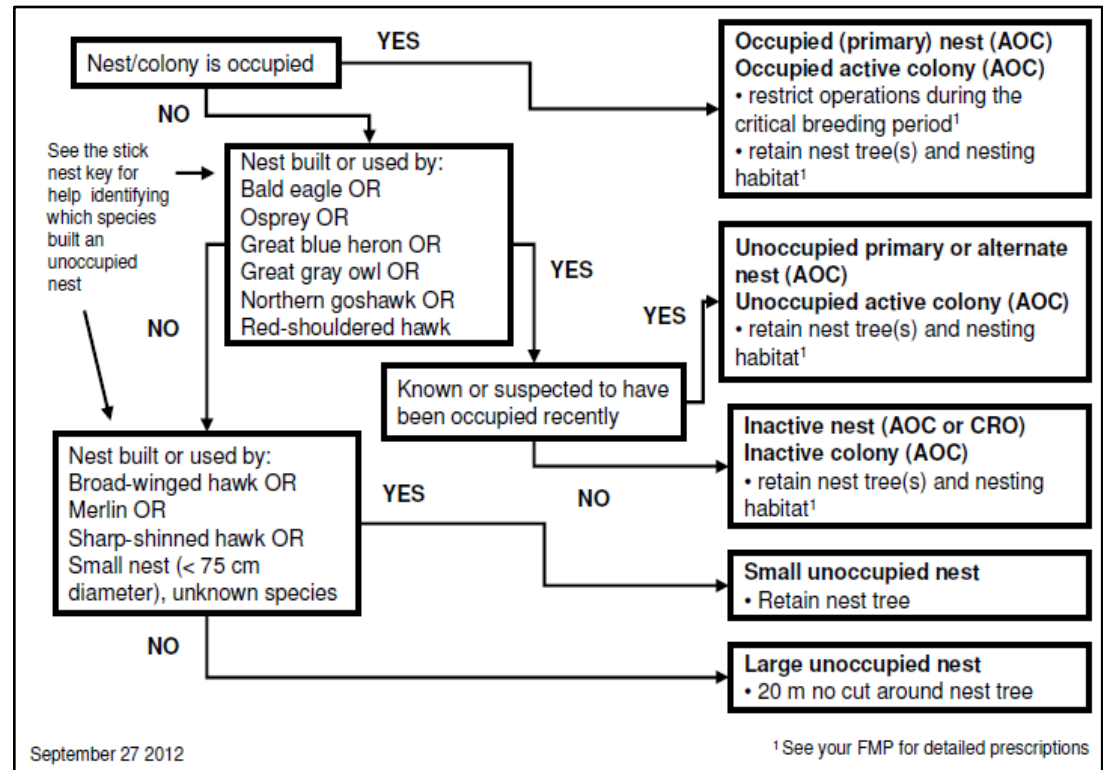
When an inactive **stick nest ≥ 75 cm in diameter** is located but the bird species is unknown, operations will move 400 m from the nest until the nest is identified, and a prescription applied.

When an inactive **stick nest < 75 cm in diameter** is located but the bird species is unknown, operations will move 300 m from the nest until the nest is identified, and a prescription applied.

Notify NDMNRF Management Biologist immediately.

When notifying MNRF; provide pictures, description, location, how identified using the key, are there birds flying around, and any other information to allow NDMNRF to identify as soon as possible. NDMNRF will work to identify the nest within 2 business days. If the nest can be identified, then the appropriate AOC or CRO will be applied.

The procedure for new values is to be followed, if necessary.



*This key is only a guide.
 The prescription found in the approved FMP has the specific details to be followed.*



Description	Source
<p>NUTRIENT LOSS – ON SHALLOW SOIL SITES</p> <ul style="list-style-type: none"> Nutrient loss can be described as the release and off-site transport of nutrients following forest management operations 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 155</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> Harvesting of shallow soil sites is preferred in the winter. Refer to conditions on renewal operations for Erosion. All ecosites classified as shallow areas identified for operations greater than 8 hectares will be identified in the Annual Work Schedule. Site disturbance associated with forest operations will be minimized on shallow sites. Where possible natural regeneration will be retained during normal clear cut harvesting. Mechanical site preparation will not be used if there is adequate disturbance of the site for renewal purposes. Minimize use of heavy mechanical site preparation (i.e. heavy drags or continuous disc trenching with down pressure) on these sites. Planting or aerial seeding without site preparation may be an alternative to mechanical site preparation. Renewal efforts will be carried out as quickly as possible to encourage full site occupancy. This should also help to prevent problems with erosion and loss of nutrients. Establish lower nutrient demanding trees (i.e. jack pine) on nutrient poor sites where appropriate. The application of chemical aerial tending will be carefully assessed on shallow soil sites prior to use to determine if appropriate for the site. 	
Description	Source
<p>RED PINE AND WHITE PINE AESTHETICS – along Rush Bay Road, Clytie Bay Road, Woodchuck Bay Road and Cameron Drive</p> <ul style="list-style-type: none"> Applies only to harvest areas accessed from these roads 	<p>Planning Team</p>
<p><u>DIRECTION:</u></p> <p>Following harvest operations, red pine and white pine will be planted where silviculturally appropriate. Where reasonable to do so the following strategies should be applied:</p> <ul style="list-style-type: none"> Regenerate silviculturally suitable areas of the harvest block with red pine and white pine. Regenerate burned slash piles with red pine and white pine. When regenerating roads, or road edges, use of red pine and white pine is preferred. When stand tending with brush saws, select for red pine and white pine when possible. 	



Description	Source
<p>RED PINE AND WHITE PINE, INCIDENTAL – within Wabaseemoong Stewardship Area Areas that contain red pine and/or white pine but are not classified as PRW Forest Unit area.</p>	<p>Planning Team</p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Areas identified for harvest which contain red pine and/or white pine but do not meet the PRW forest unit definition, no harvest of the red pine or white pine will occur unless necessary for road, landing or aggregate pit construction. • These areas will be managed to meet the silvicultural strategy to increase the area of the red pine and white pine on the forest. 	
Description	Source
<p>RESIDUAL FOREST – MAPPED</p> <ul style="list-style-type: none"> • Direction to facilitate movement of mapped residual that is not serving any other specific purpose (AOC, specific habitat function, etc.), and would otherwise be available for harvest. • Condition <u>does not apply</u> where species-specific emphasis management is identified (e.g. caribou zone). 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 14-18</i></p>
<p><u>FOREST DEFINITION:</u></p> <ul style="list-style-type: none"> • Residual forest is a forested patch that generally functions more as habitat for wildlife that inhabit older forest than as habitat for wildlife that inhabit younger forest. • Residual forest can also include some immature (i.e. neither young nor old) forest. <p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Mapped residual that is not serving any other specific purpose (e.g. AOC, specific habitat function, etc.), and would otherwise be available for harvest, can be moved during operational implementation as long as: <ul style="list-style-type: none"> ◦ The residual requirements from the Stand and Site Guide in Section 8.3.1.1 of this FMP are still met after the residual is moved (i.e. 25 ha. residual in 500 ha. circle, or 0.5 ha. residual in 50 ha. circle); ◦ The planned harvest area by forest unit is not exceeded; ◦ The mapped residual polygons eligible for movement are specifically identified in tables in FMP text Section 4.3.2.1 and Section 4.3.2.2. 	

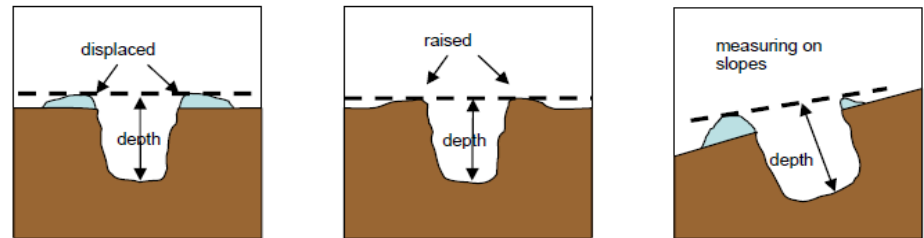


Description	Source
<p>RESIDUAL FOREST – UNMAPPED</p> <ul style="list-style-type: none"> • Direction to facilitate the location of unmapped residual forest • Residual Forest – quantifiable definition – Crown productive forest that is established, >10 m tall or 35 years old, a minimum of 0.1 ha and of a pattern, composition and density similar to pre-harvest stands. • Condition <u>does not apply</u> where species-specific emphasis management is identified (e.g. caribou zone) 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 14-18</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Implementation of the harvest plan will ensure that any point within a new clearcut harvest area will have at least 0.5 ha of residual forest within a 50 ha circle about that point • When locating unmapped residual forest, give preference to locations connected to habitat features encountered during operations such as bird nests, furbearer dens, woodland pools, etc. When additional habitat features are not encountered, give preference to uncommon forest types, locations connected to known values (water, nests, etc.), or located consistent with expected disturbance behaviour. • See FMP Section 4.3.2 Stand Level Residual for unmapped areas requiring additional residual in this FMP. These residual areas may be located (moved) within the Area of Influence zone. 	
Description	Source
<p>RICH LOWLAND HARDWOOD-DOMINATED FOREST (black ash) – mapped and unmapped pockets greater than or equal to 0.5 ha. encountered during operations</p>	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 58-59</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • Harvest of rich lowland hardwood-dominated forest (Analysis Unit: HRDA) will follow direction contained in FMP-4 Silvicultural Ground Rules HRD forest unit. • No harvest, renewal, or tending operations are permitted that exceed the rutting and compaction standards or disrupt hydrological function. • Reasonable efforts will be made to avoid crossing rich lowland hardwood-dominated forest with extraction trails during the frost-free period. During all seasons, crossings will be minimized and will follow the appropriate operating practices to minimize potential site damage and effects on hydrological function. 	



Description	Source
<p>RUTTING & COMPACTION</p> <ul style="list-style-type: none"> Direction that prevents, mitigates, and/or rehabilitates rutting and compaction associated with forest management operations. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 148-150</i></p>
<p>DIRECTION:</p> <ul style="list-style-type: none"> No more than 50% of any 0.1 ha circle is permitted in ruts. No ruts permitted that channel water into, or within 15 m of lakes, ponds, rivers, streams, woodland pools, or those portions of mapped non-forested wetlands dominated by open water or non-woody vegetation (see Wetlands). <u>Shallow soils (<30 cm)</u>: No more than 5% of any 20 ha area (or the operating block if less than 20 ha) is permitted in ruts. <u>All other soils</u>: No more than 10% of any 20 ha area (or the operating block if less than 20 ha) is permitted in ruts. <ul style="list-style-type: none"> In clearcut operations, where advanced regeneration is a significant contributor to future forest development (e.g., CLAAG, HARP, white pine advanced regeneration, tolerant hardwood understory, etc.), the area in extraction trails will be minimized. On sites susceptible to rutting, achievement of this guideline will have to be balanced against the increased rutting that may occur when extraction is concentrated on fewer trails. Operations within ecosites susceptible to rutting should consider the timing of operations to mitigate soil disturbance. The area of rutting and compaction may be minimized, by; <ul style="list-style-type: none"> Brush mats, slash, or corduroy may be placed on heavy traffic areas such as main skid trails and organic sites to reduce rutting. <p>Defining Terms</p> <ul style="list-style-type: none"> <u>Rut</u>: Continuous trench or furrow created by machine traffic that is ≥4 m long and ≥30 cm deep (Figure 2). When operating on shallow soils the lesser of depth to bedrock/large boulders or 30 cm will be used. <ul style="list-style-type: none"> When the depth varies across the width of the rut (i.e., perpendicular to the direction of travel), the deepest point is to be measured as the depth. When a rut has been filled, or partially filled with soil, litter, water, or debris, the depth should be measured as if the rut had not been filled. This includes areas in organic soil where churning and mixing of surface and sub-surface organic layers have occurred. 	

Figure 1



- Depth is to be measured from the surface of the soil, including organic layers (LFH) if present (Figure 1).
- Ruts may be empty, filled with water, or filled with varying amounts of intermixed organic and mineral soil/debris. In cases of concentrated heavy rutting it may be difficult to distinguish individual ruts.
- Furrows, scalps, trenches, etc., created specifically for site preparation purposes are not considered ruts.
- When determining if a potential rut is at least 4 m long, the length is measured as the contiguous portion that is deeper than 30 cm (or depth to bedrock / large boulders), and is not to be an average depth measurement where some of the length is less than 30 cm.
- Extraction trails:
 - Anywhere a machine being used for extraction (skidder, forwarder, etc.) has traveled within the block (excluding travel on roads, landings, and roadside work areas.)
- Roadside-work-area:
 - Extends 35 m from road edge where roadside processing is occurring; includes chipper pad
 - Does not contribute to ruts but does contribute to 20 ha area
- Roadside
 - Road side work area is defined as areas at the edge of the road where concentrated activity other than skidding (piling, delimiting, slashing, chipping, slash piling, etc.) is necessary to receive and process wood from the rest of the harvest area.
 - Road edges, outside of roadside work areas, are also exempt to a distance of 10 m from the road edge
 - Does not contribute to ruts but does contribute to 20 ha area.
- Disruption of hydrologic function:
 - Alteration of the physical characteristics of a site such that the natural flow of water, on or below the surface, is significantly impeded (e.g., by damming), accelerated (e.g., by channelization), or diverted (e.g., by ditching).
 - The natural “watering up” process associated with the removal of forest cover is **not** considered a hydrological disruption.

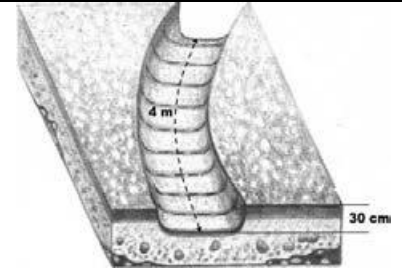


Figure 2

Description	Source
<p>SALVAGE HARVEST</p> <ul style="list-style-type: none"> The direction in this section will apply to all salvage operations, regardless of the origin or type of natural disturbance that led to the decision to engage in salvage operations. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 160-161</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> Consistent with direction in Wildlife Trees – Clearcut Silviculture System, salvage harvest will normally retain a minimum average of ≥ 25 stems/ha ≥ 3 m in height and ≥ 10 cm dbh. This is the minimum average for the harvest block (or minimum average per 20 ha if the harvest block ≥ 20 ha) contingent upon sufficient numbers and types of standing stems being available and in a condition suitable for retention. Salvage operations will consider strategic landscape objectives (e.g. may contribute to young forest amount or patch size frequency, provision of even-aged future forest in caribou management DCHS area). When finalizing boundaries of a salvage operation that results from wildfire, the area of undisturbed forest included in the salvage operation will be minimized. When finalizing boundaries of a salvage operation that results from blowdown, insect infestation, or other factors (e.g., ice storms), the area of the salvage operation can include undisturbed forest. When salvage operations include undisturbed area, conditions on residual forest retention, wildlife trees, and downed woody material apply. The trees retained following salvage operations will have a range of distribution patterns (relatively even-spaced to some clumping), recognizing operational limitations, and subject to the availability of standing trees. <ul style="list-style-type: none"> Whenever possible, the trees retained following harvest will be the same species and size classes as trees that would have been retained following normal harvest (as per direction below ‘Wildlife Trees – Clearcut Silviculture System’). Adjust the timing of entry and/or other operational factors to minimize unnecessary site disturbance that could potentially result in ecological damage (e.g., avoid salvaging a swamp in the frost-free period). Reasonable efforts will be made to avoid windrowing or crushing of downed woody material. 	

1



Description	Source
<p>WETLANDS – mapped permanent, non-forested</p> <ul style="list-style-type: none"> ○ Mapped, open wetlands (polygon types = OMS), treed wetlands (polygon types = TMS), and brush & alder wetlands (polygon type = BSH). Polygons identified as brush & alder that are not wetlands (e.g., old fields) are excluded. In the field, the boundary between non-forested wetlands and forest is defined where the canopy cover of trees $\geq 10\text{cm dbh}$ is $\geq 25\%$ or the canopy cover of trees $\geq 1.5\text{ m tall}$ is $\geq 30\%$. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 59-60</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> ● No contamination of wetlands by foreign materials is permitted. Specifically, <ul style="list-style-type: none"> ○ The use and storage of fuels will be carried out in accordance with the <i>Liquid Fuels Handling Code</i>. ○ No equipment maintenance (e.g., washing or changing oil) is permitted within 15 m of non-forested wetlands. ● No harvest, renewal, or tending operations are permitted that will result in significant damage to wetland vegetation or disruption of hydrological function. Operations specifically prohibited include: <ul style="list-style-type: none"> ○ Machine travel during the frost-free period within 3 m of the high-water mark of those portions of the wetland dominated by open water or non-woody vegetation (i.e., vegetation communities with $< 25\%$ canopy cover of trees, tall ($\geq 1\text{ m}$ high) woody shrubs such as alder or willow, or low ($< 1\text{ m}$ high) woody evergreen shrubs such as Labrador tea or leatherleaf). ○ Excessive removal or damage of sapling-sized trees ($< 10\text{ cm dbh}$) and shrubs within 3 m of those portions of the wetland dominated by open water or non-woody vegetation. ○ Felling of trees during the frost-free period into, or within, 3 m of those portions of the wetland dominated by open water or non-woody vegetation. Trees accidentally felled into those portions of the wetland dominated by open water or non-woody vegetation will be left where they fall. ○ Operations that leave ruts, a significant area of exposed mineral soil, or disrupt hydrological function (see Hydrological Impacts) within the wetland itself or within forest that is within 15 m of those portions of the wetland dominated by open water or non-woody vegetation. Ruts or significant patches of exposed mineral soil will be promptly rehabilitated. ● Reasonable efforts will be made to avoid crossing wetlands with extraction trails during the frost-free period. During all seasons, and where no reasonable alternative route exists due to rugged terrain/reserves in adjacent areas, crossings will be minimized and will follow the appropriate operating practices described in Rutting & Compaction and Erosion to minimize potential site damage and effects on hydrological function. 	

1



Description	Source
<p>WILDLIFE TREES – CLEARCUT SILVICULTURE SYSTEM</p> <ul style="list-style-type: none"> • Applies to all harvest areas in the management unit. • Trees retained during forest operations, with the intent to provide structure and features beneficial to wildlife in general, and for specific species, groups or communities, are collectively referred to as wildlife trees. • Wildlife trees must be ≥ 10 cm dbh and ≥ 3m in height unless: <ul style="list-style-type: none"> ○ The direction specifies that ‘large’ stems or stubs are to be retained. In this case, the minimum dbh is ≥ 25cm • The direction specifies that cavity trees, mast trees, scattered conifers, veteran trees, or supercanopy trees are to be retained. In this case, the minimum dbh is normally ≥ 25cm. Moreover, supercanopy trees will generally be ≥ 60cm in dbh. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 19-21</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • The following is required in any given 20 ha within a block where harvest has occurred or for the entire block when the block is less than 20 ha • Since trees or stems desirable as wildlife trees may not always be present, all requirements below include the provision ‘when available’. In situations where wildlife tree requirements cannot be achieved because trees are too small, requirements will be considered to be met if suitable types of trees are retained from the largest size available <ul style="list-style-type: none"> ○ Retain an average of ≥ 36 stems/ha in the Wabaseemoong Stewardship Area. ○ Retain an average of ≥ 25 stems/ha in the rest of the Kenora Forest (non-WSA area). <ul style="list-style-type: none"> ○ Retain an average of ≥ 10 large stems or large stubs/ha with a minimum of 5 large living trees on each hectare. ○ When large wildlife trees are specified, stems ≥ 38cm dbh are preferred or large stems as provided by the stand conditions ○ Large wildlife trees will be a mix of living cavity trees, stubs, supercanopy trees, veteran trees, mast trees, diversity trees, and safe dead trees. Wildlife trees that may function as potential nest, perch and roost sites will be preferentially retained based on the following order of priority: <ol style="list-style-type: none"> i. Super-canopy trees ii. Veteran trees, iii. Cavity trees and iv. Other live dominant/co-dominant trees that are windfirm. <ul style="list-style-type: none"> ▪ White pine, red pine and poplar trees will be favoured when available. ○ Additional wildlife tree requirements may be met by retaining small safe standing dead trees, stubs, or any other living trees. 	



- Wildlife trees will generally be well dispersed. Retain an average of at least 15 individual stems/ha; the remaining stems may occur in clumps.
- Wildlife trees that fall to the ground, or are purposely felled for worker safety reasons, become downed woody material (DWM) (see conditions under DWM).
- Reasonable efforts will be made to avoid knocking down standing wildlife trees during renewal and tending treatments.
- When safe and practical to do so some wildlife trees can be stubbed. The preferred species to be stubbed are jack pine and black spruce:
 - i. To a height of ≥ 3 m (5 m is preferred),
 - ii. Generally, do not stub existing cavity trees (however, it is acceptable to stub a tree with cavities below the stubbing height),
 - iii. Do not stub trees being relied upon as a seed source, and
 - iv. Do not stub wildlife trees if they are better suited for other wildlife tree functions (e.g., mast trees; fire resistant species like white pine, red pine are generally more appropriate to help achieve veteran and supercanopy direction).
- When stubbing, try to have stubs scattered throughout the clearcut.
- When ≥ 10 stems occur over an area < 0.1 ha this will be considered a clump and the stems will count for no more than 10 wildlife trees, regardless of how many there actually are. In a clearcut harvest area, any uncut or partially cut area greater than or equal to 0.1 ha that meets the definition of residual forest will not contribute to individual wildlife tree requirements.

Description	Source
<p>WOODLAND POOLS</p> <ul style="list-style-type: none"> • Woodland pools encountered during operations • Recognizable temporary bodies of open water encountered during operations that have a surface area $\geq 500 \text{ m}^2$ (i.e., about 25 m in diameter if circular), are not ponds (i.e., $< 0.5 \text{ ha}$ in size), and are not connected to a stream or associated with a mapped non-forested wetland. 	<p><i>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scale, 2010. p 60-61</i></p>
<p><u>DIRECTION:</u></p> <ul style="list-style-type: none"> • No contamination of woodland pools by foreign materials is permitted. Specifically, <ul style="list-style-type: none"> ○ The use and storage of fuels will be carried out in accordance with the Liquid Fuels Handling Code. ○ No equipment maintenance (e.g., washing or changing oil) is permitted within 15 m of high-water mark of pools. • No harvest, renewal, or tending operations are permitted that will result in deposition of sediment within, or reduction of the water-holding capacity of, woodland pools. Operations specifically prohibited include: <ul style="list-style-type: none"> ○ Machine travel within 3 m of the high-water mark of pools during the frost-free period. ○ Excessive removal or damage of sapling-sized trees ($< 10 \text{ cm dbh}$) and shrubs within 3 m of the high-water mark of pools ○ Felling of trees into pools or within 3 m of the high-water mark of pools during the frost-free period. Trees accidentally felled into pools will be left where they fall. ○ Disturbance of the forest floor that leaves ruts or a significant area of exposed mineral soil within 15 m of the high-water mark of pools. Ruts or significant patches of exposed mineral soil will be promptly rehabilitated. • Retention of residual forest within and adjacent to pools will be as follows: Unmapped residual patches required to meet the direction outlined above (Residual Forest – Unmapped) will preferentially be connected to pools. When connecting residual patches to pools, trees will be retained in and within 3 m of the high-water mark to provide overhead shade and residual forest will be retained within at least 15 m of the high-water mark to provide amphibian cover. 	

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4.3 Harvest Operations

This section of the FMP describes the planned harvest operations for the 10-year period of the plan.

The available harvest area determined through strategic modelling was described in the Long-Term Management Direction (in Section 3.7.2). The 10-year planned harvest area, associated harvest volumes and projected utilization of volume are discussed in the following subsections:

- Section 4.3.1 Harvest Areas
- Section 4.3.2 Stand Level Residual in Harvest Areas
- Section 4.3.3 Completion of On-going Harvest from Previous Plan
- Section 4.3.4 Fuelwood Areas
- Section 4.3.5 Harvest Volume
- Section 4.3.6 Wood Utilization
- Section 4.3.7 Salvage
- Section 4.3.8 Contingency Area and Volume
- Section 4.3.9 Harvest Area Information Products

4.3.1 Harvest Areas

There were a number of management considerations and variables influencing operational planning on the Kenora Forest (as discussed in detail in Sections 3.2 and 3.4). The Company conducted its operational planning with the following considerations:

- Consideration for harvest eligibility and consideration for selection criteria (Section 3.7.2);
- Adherence to Dynamic Caribou Habitat Schedule block timing;
- **FINAL PLAN NOTE**: To address the significant area burnt in 2021 in the DCHS, all harvest in the 2022 FMP draft plan was removed (no DCHS harvest in the final plan).
- Selection of harvest areas to be consistent with the 10-year available harvest area by forest unit, with secondary consideration for age class;
- Consideration of all currently identified values through area of concern planning, including the implementation of no harvest reserve area of concern prescriptions;
- Consultation and negotiation with the public, Indigenous communities and other stakeholders;

- 1 • Consideration for residual forest pattern requirement (residual patches and
- 2 wildlife trees); and,
- 3 • Identified operational considerations and conditions for specific harvest areas.

4
5 The available harvest area from the LTMD (Section 3.7.1) and the planned harvest area
6 for the 10-year period of the plan are reported in Table FMP-12 by forest unit and age
7 class. Detailed area of concern planning has been conducted for the planned harvest
8 area.

9
10 The distribution of the planned harvest area by licensee grouping is reported in Table
11 FMP-14 (see Section 4.3.6). It is projected that all 100% of the planned harvest area
12 will be harvested by OFRL licensees as harvesting is carried out by individual Forest
13 Resource License holders and not by the single entity SFL holder. The 14 OFRL
14 licensees (harvest shareholders) on the Kenora Forest are listed in Table 44:

15
16 **Table 44 Kenora Forest Overlapping Forest Resource Licensees (OFRLs)**

Harvest Shareholder	Shareholder Agreement Volume (cubic metres)
Weyerhaeuser Company Limited	146,100
Devlin Timber Company (1992) Limited	56,562
Wabaseemoong	30,568
Ojibways of Onigaming FN Economic Development LP	19,555
Nakka	7,943
Shoal Lake #40	2,407
Alcock	1,805
Banning	963
Domtar Inc.	12,035
Horley	4,814
W5 Logging Ltd.	12,757
705 Ontario	9,628
Kreger	7,221
Anderson	1,805
Total:	314,163

18
19
20 Typically, all OFRLs are reviewed annually. The approval of the FMP does not
21 represent an agreement to make harvest area available to a particular licensee.

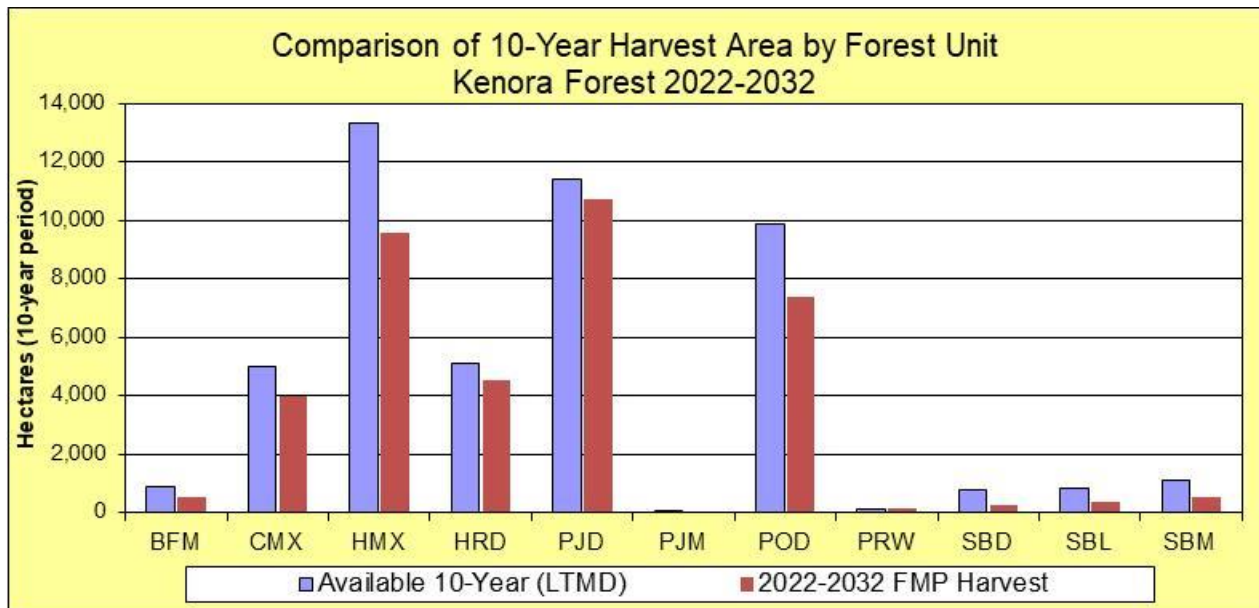
22
23 No areas were identified for harvest as a result of an insect pest management strategy,
24 nor for implementation of a silvicultural trial.



1 The total available harvest area (AHA) for the 10-year period projected by the Long-
 2 Term Management Direction is 48,587 hectares. The total planned harvest area for the
 3 10-year plan period does not exceed the available harvest area (38,109 ha, Table FMP-
 4 12), nor does any forest unit area exceed the available harvest area for that forest unit
 5 (Figure 37).
 6

7 All forest units' planned harvest areas are at or below projected LTMD harvest levels for
 8 this 10-year period. The majority of the planned harvest for this FMP is in the PJD
 9 forest unit (28%), followed by HMX (25%), and POD (19%). CMX and HRD each
 10 comprise 10% and 12% (respectively) of the planned harvest area. The remaining
 11 forest units, all combined, account for the remaining 6% of the planned harvest area
 12 (BFM 1%, SBD 1%, SBL 1%, SBM 1% and incidental areas of PRW and PJM).
 13

14 **Figure 37 Comparison of 10-Year Harvest Area by Forest Unit**
 15



16
 17
 18 During the selection of harvest areas, consideration was given to projected available
 19 harvest area from the Long-Term Management Direction, current forest conditions,
 20 desired forest and benefits, stakeholder comments, fish and wildlife habitat, water
 21 quality, cultural heritage values, tourism values, retention of old growth forest area,
 22 caribou DCHS block timing and overall natural disturbance pattern.
 23

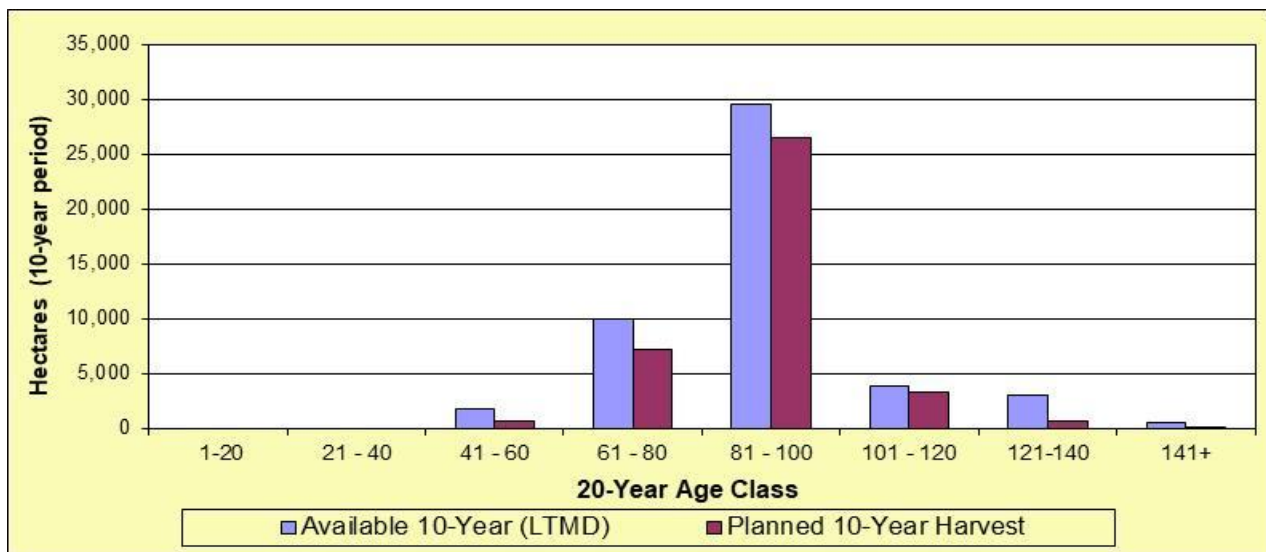
24 The comparison of the 10-year LTMD available harvest area and planned harvest area
 25 by 20-year age class is illustrated in Figure 38.
 26



1 There is minimal variation in allocation by forest unit and age class (Figure 37 and
 2 Figure 38). The strategies implemented maintained consistency between the available
 3 area and the planned area. Differences between available area and planned area by
 4 age classes are attributed to fine scale operational review (i.e. mistyped FRI stocking or
 5 operational merchantability) and adjustments from public consultation (i.e. AOC
 6 adjustments). Harvest was planned to adhere as closely as operationally possible to
 7 SFMM LTMD projections in order to contribute to achievement of Boreal Landscape
 8 Guide objectives and socio-economic objectives. Refinement of planned harvest
 9 operations resulted in very minor shifts from one age class to the next older age class
 10 (mainly 101-120 years) for most forest units. No planned harvest area is assigned
 11 below the eligible age ranges for age of operability within the 10-year plan. Rationale
 12 for planned harvest areas is included in Section 4.3.1.1.

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 14
 15

Figure 38 Comparison of 10-Year Harvest Area by 20-Year Age Class



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 17

18 All eligible stands for harvest in this plan were reviewed by Miisun operational staff
 19 using aerial imagery to determine operability, access concerns, seasonal wood flow,
 20 adjacency to maturing stands (younger wood coming on line in near future), and
 21 stakeholder concerns and commitments. This resulted in a high level of confidence in
 22 the operational feasibility of allocated harvest areas, and provides a solid operational
 23 foundation for successful implementation of this plan.

24

25 Section 4.9.1 (comparison of the harvest area associated with the Long-term
 26 Management Direction to the model run with the planned harvest areas) documents that
 27 the age class substitutions in the planned harvest area for this plan do not impact long-
 28 term forest sustainability, or the long-term harvest area and volume.

4.3.1.1 Operational Considerations for Specific Harvest Operating Areas

The following discussion explains the reasons for the selection of harvest allocations throughout various areas of the forest. The proposed allocations were geographically dispersed and rationale for each specific operating area was developed and prepared with NDMNRF district and regional staff, as part of the Operations Task Team.

Results from the SFMM LTMD strategic modelling was a primary consideration for the amount of area by forest unit allocated as planned harvest. Consideration was also given to targeting the appropriate age classes for harvest allocations, while developing operationally feasible harvest blocks. Refinements were made to address specific concerns related to stakeholder requests, AOC prescriptions or critical operational constraints (such as fine scale inoperable terrain).

For the Draft FMP in June 2021, the planned harvest areas within the active caribou subunits were selected to be at the southern end of the “B” blocks. This was done because there is substantial road (Umfreville Lake Road, Sydney Lake Road East and Sydney Lake Road West) required to access the area. Having preferred harvest areas as close as possible is required to ensure the access to the caribou subunits is economically feasible. Another consideration was to identify as many preferred harvest areas along the Umfreville Lake road as possible to facilitate the construction of this road.

FINAL PLAN NOTE: These harvest blocks in the DCHS and north Umfreville Road area were removed for the final FMP since most of this area burnt in Fire KEN51 in 2021.

During the identification of preferred areas there were areas identified in various locations to provide harvesting opportunities for Indigenous quota holders (licensees). This occurred in the vicinity of High Lake (south of Hwy #17w), Goshawk Lake, Cygnet Lake, Cameron Lake, Aulneau Peninsula and Maybrun Roads. Additionally, one area in the Cygnet Lake Road area was avoided to address a concern raised by an Indigenous trapline holder.

The Western Peninsula was identified for operations to facilitate the construction of the Westway Road. These allocations and road construction will not only provide a significant amount of hardwood for the local Weyerhaeuser mill, but also provide potential seasonal access near several Indigenous communities.

1 Another consideration in the identification of preferred harvest areas was the
2 seasonality of harvest. With the Western Peninsula and the end of Cygnet Lake Road
3 being only winter accessible it was important to identify areas that are all weather
4 accessible. The areas that were identified to balance the summer/winter split are
5 located east of Sand Lake (west of English River Road) and the southern portion of the
6 Kenora Forest (Cameron Lake Road and Maybrun Road).

7
8 During plan development from Stage Three (Proposed Operations) to Stage Four (Draft
9 Plan) and finally to Stage Five (Final Plan), several adjustments to planned harvest
10 blocks were made in response to operational considerations. Operational changes
11 included refinement of harvest block boundaries, adjustment of areas of concern
12 prescriptions, and moving allocations from one area to another or between planned
13 harvest and contingency harvest.

4.3.2 Stand Level Residual in Harvest Areas

NDMNRF Forest Policy Section has developed a series of guiding documents to assist forest managers in the planning and implementation of forest management activities so that forestry activities are consistent with direction contained within the *Crown Forest Sustainability Act*.

The *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* is one of such documents, and has been developed to provide forest management planning guidance to forest managers at the stand and site level. Of particular relevance to this section of the forest management plan is the requirement to maintain residual forest within clearcut harvest areas.

Residual Forest Distribution Requirements for Caribou Zone - Since the Kenora Forest used caribou-specific habitat management emphasis in the caribou zone where the DCHS is applied, the stand-level residual to be retained in the caribou zone is the requirement for retention of wildlife trees in the harvest blocks. This is discussed in Section 4.2.2.2 Conditions on Regular Operations, in Table 42, Section: Wildlife Trees – Clearcut Silvicultural System. Insular and peninsular residual patches discussed in the Stand and Site Guide are not applied to forests in the caribou habitat management zone as it is a species-specific emphasis area, however individual wildlife trees are retained.

Residual Forest Distribution Requirements for Moose Emphasis Areas - The *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* identifies that residual requirements do not apply to areas within the Moose Emphasis Areas that are species-specific emphasis areas. All areas identified by the Evaluate Forest Residual Tool (EFRT) were compared against the planned harvest information. Where EFRT identified areas within MEAs, these areas are not reported as areas requiring additional residual.

Residual Forest Distribution Requirements for Non-DCHS and Non-MEA Areas - The *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* directs the amount and distribution of stand level residual. Regional NDMNRF advisors, aided by Miisun staff, analyzed the amount of stand level residual associated with the planned harvest for the 10-year plan period through the use of an NDMNRF-developed computer spatial analysis program.

The Stand and Site Guide states that residual forest will be retained as follows:

- **“25 in 500 ha Analysis”** - Within each 25 ha of residual forest within any 500 ha circle (or hexagon), a minimum of one single patch will be greater than 5 ha (results discussed in Section 4.3.2.1).
- **“5 of 25 ha Analysis”** - A minimum of 5 ha of the mapped residual (minimum 25 ha) within any 500 ha circle (or hexagon) will belong to a patch greater than 5 ha (results discussed in Section 4.3.2.2).
- **“0.5 in 50 ha Analysis”** – Implementation of the harvest plan will ensure that any point within a new clearcut harvest area will have at least 0.5 ha of residual within a 50 ha circle (or hexagon) about that point. This residual may or may not be mapped in advance of operations (results discussed in Section 4.3.2.3). The conditions on residual, unmapped in Section 4.2.2.2 CROs table apply.
- **Mapped residual** that is not serving any other purpose (AOC, specific habitat function, etc.), and would otherwise be available for harvest, can be moved during operational implementation. Refer to Section 4.2.2.2 CROs table for conditions that apply to movement of Residual, mapped.

Mapped and unmapped residual patches are required for the planned harvest operations in all areas outside of the DCHS and MEAs. The results are described in the subsection below.

4.3.2.1 25 in 500 ha Analysis Results

Requirement: *Operational planning will ensure that any point within a planned clearcut harvest area will have at least 25 hectares of **mapped** residual forest within a 500 hectare circle (or hexagon) about that point.*

Results:

The NDMNRF ran the Evaluate Forest Residual Tool (EFRT) on the planned allocations. Results confirmed that all but one harvest area met this residual requirement. The one area that requires additional residual forest area to be added is identified in Table 45. In this area the required leave (residual) area is extremely small and is adjacent to a five hectare leave patch for moose habitat that was not identified as residual in the EFRT assessment.

Table 45 Areas Requiring Additional Residual (25 in 500 ha Analysis)

RESID CODE (ID in PRP layer)	Harvest Block ID	Residual Required (ha)
RP213	22.002	0

4.3.2.2 5 of 25 ha (20%) Analysis Results

Requirement: Within each 25 ha of residual forest within any 500 ha circle (or hexagon), a minimum of one single patch will be greater than 5 ha

Results:

The NDMNRF ran EFRT on the planned allocations and there were three (3) planned harvest areas identified as requiring additional residual to meet this requirement (Table 46). In the areas identified through eFRT, the area that is required for residual is extremely small and is adjacent to leave patches for moose habitat that were not identified as residual in the EFRT assessment.

Table 46 Areas Requiring Additional Residual (5 in 25 ha Analysis)

RESID CODE (ID in PRP layer)	Harvest Block ID	Residual Required (ha)
RP213	22.002	0
RP214	22.018	0
RP215	22.015	0

4.3.2.3 0.5 in 50 ha Analysis Results

Requirement: Implementation of the harvest plan will ensure that any point within a new clearcut harvest area will have at least 0.5 hectare of residual within a 50 hectare circle (or hexagon) about that point.

Results:

The NDMNRF ran EFRT on the planned allocations and identified 188 locations within planned harvest areas that require a minimum 0.5 hectare patch of residual to be retained during operations.

The designated areas where the 0.5 hectare patch of residual are required to be left are **not** identified on 1:20,000 scale operations maps by a polygon. The exact location of the individual residual patches associated with the 0.5 ha patch will be determined at the time of harvest during the AWS.

The 0.5 hectare patches will **not** be in the Planned Residual Patches layer (MU644_22_PRP00) as they are **unmapped**. Before harvest operations begin, the operators will be given a map showing the above identified areas where a 0.5 hectare residual patch will be required to be placed during operations.

- 1
- 2 The operators must follow the conditions on regular operations (Section 4.2.2.2) for
- 3 “residual, unmapped”, and “Large Landscape Patches – Moose Emphasis Areas
- 4 (MEA)” in determining the location of unmapped residual within the designated
- 5 boundary.

4.3.3 Completion of On-going Harvest Operations from Previous Plan

Areas of bridging operations may be identified to allow for the completion of harvest operations from the 2012-2022 FMP. Under the 2020 FMPM, the amount of bridging area and time for completion of bridging harvest is defined by the FMP planning team. The Planning Team discussed and agreed that select harvest areas that remain to be harvested or require completion of harvest from the 2012-2022 FMP may be scheduled and be eligible for harvest for the first four (4) years of this plan, and must be completed by March 31, 2026. The bridging harvest of PRW forest unit must be completed within seven (7) years by March 31, 2029 to ensure that wood supply commitment levels are satisfied (Section 4.3.6).

Bridging harvest areas are identified in the planned harvest layer and on maps for this FMP. Planned bridging harvest areas will be identified in the first four Annual Work Schedules for the 10-year FMP period. These bridging harvest areas, when harvested, will be reported in the Annual Report, and will be assessed against the available harvest area for the 2012-2022 FMP period. Bridging harvest area does not contribute to the maximum three years of harvest allowed in an AWS for this FMP period.

The following areas have been identified as bridging harvest from the 2012-2022 FMP (Table 47). A total area of 7,876 ha has been identified as bridging harvest; however it is expected that some of these areas will have been depleted prior to plan start (April 1, 2022). Ongoing operations in some of these areas will take place during the remaining months of the 2012-2022 FMP, after submission and approval of this 2022-2032 FMP.

Second pass harvesting is not carried out on the Kenora Forest.

Table 47 Bridging Harvest Areas

Past Plan Forest Unit	Bridging Area (ha)
BFM	5
CMX	2,163
HMX	1,935
OCL	0
OTH	141
PJD	465
PJM	1,559
POD	324
PRW	374
SBL	0
SPD	253
SPM	656
TOTAL	7,876

1 4.3.4 Fuelwood Areas

2

3 All harvest areas are identified as being available to the public for the collection of
4 fuelwood. Areas are available following completion of harvest activities and once an
5 appropriate fuelwood permit has been obtained from the NDMNRF.

6

7 **The locations where fuelwood can be obtained will be identified in each Annual**
8 **Work Schedule.**

9

10 In order to provide for maximum utilization of unmerchantable timber, any
11 unmerchantable timber left near roadside or in slash piles may be made available for
12 fuelwood. Traditionally, the NDMNRF has dealt with the issuance of personal use
13 fuelwood permits to general public and will continue to do so.

14

15 Where NDMNRF receives requests from individuals wishing to harvest small volumes of
16 timber for personal use (e.g. fencing, green wood or tree parts, boughs, cones used for
17 crafts) the requests will be reviewed to ensure consistency with the FMP and AWS. An
18 OFRL for personal use will then be issued consistent with the overlapping agreement
19 between the company and individual.

20

21 Fuelwood will only be available if timber was not left on site for a specific reason. In all
22 blocks, timber will be left standing intentionally to enhance wildlife habitat and natural
23 disturbance patterns and will be unavailable for fuelwood. No standing residual trees
24 shall be cut.

25

26 No fuelwood will be considered available within a block once renewal activities have
27 commenced, or after a period of two years after harvest operations have ended. This
28 strategy is intended for the protection of regenerating trees, whether they were initiated
29 naturally or artificially.

4.3.5 Harvest Volume

The estimated LTMD available harvest volume and the estimated planned harvest volume for the planned harvest area for the 10-year period are recorded in Table FMP-13. Harvest volumes were calculated using MIST stand-level volume generation for allocated stands.

The LTMD projected an available net merchantable harvest volume of approximately 4.87 million cubic metres for the 10-year period of the plan (2.4 million cubic metres of conifer and 2.44 million cubic metres of hardwood). An estimated 247,900 m³ of defect volume and 93,600 m³ of undersized volume per year are potentially available through harvest of the full available harvest area (LTMD) for this 10-year plan period. The total of net merchantable available harvest volume, defect and undersized volume is estimated to be 8,287,950 m³ for this 10-year plan period 2022-2032 (total 828,795 m³ per year for all three volumes types combined).

As reported in Table FMP-13, the total net merchantable planned harvest volume for the 10-year period of the plan is approximately 4.29 million net merchantable cubic metres (total conifer is 2.20 million cubic metres, and total hardwood volume is 2.09 million cubic metres). Approximately 2.09 million cubic metres of additional undersized and defect biomass volume is estimated to be available in the 10-year FMP (1.63 million cubic metres of defect and 0.47 million cubic metres of undersized biomass). On an annual basis, the average volume, net merchantable plus undersize/defect biomass, will be a total of approximately 638,200 cubic metres per year. This volume was a result of managing for mill demand, generally maintaining Spruce-Pine-Fir volumes between plan periods and managing the decrease in Poplar volumes over the next 50 years. Volumes also decreased since harvest blocks in the DCHS in this 10-year plan period were removed from the final plan due to 2021 wildfire. Recognized mill demand for Spruce-Pine-Fir and White Birch are projected to be met in all plan periods. Mill demand for Poplar is projected to be satisfied for the next 30 years, after which a potential shortfall from the Kenora Forest is expected. LTMD available volume and planned harvest volume are portrayed in Figure 39 by forest unit.

The consistency between the estimated LTMD available harvest volume and the estimated planned harvest volume is a result of the strategies implemented during planning of harvest areas described in Section 4.3.1.

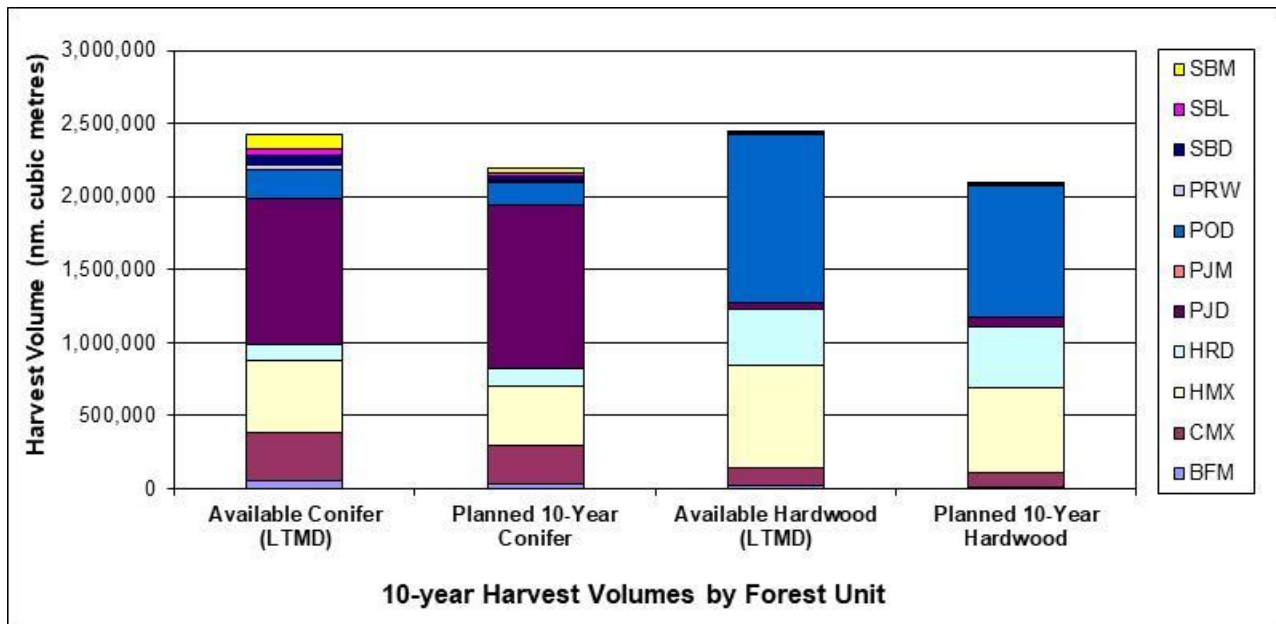
The planned harvest volume in this plan period meets or is above the target for the Objective 6 Wood Supply, Indicator 6c for Long-term Harvest Volumes for all species



1 groups. This achievement is a result of ensuring that planned harvest area was close to
2 the available harvest area by forest unit (Section 4.3.1).

3
4
5

Figure 39 Available and Planned Harvest Volumes 2022-2032 by Forest Unit



6
7

8 The LTMD projects an average of 100 net merchantable cubic metres per hectare (130
9 cubic metres per hectare total volume of net merchantable and biomass volumes) and
10 the actual allocations for the 10-year period are comparable with an average of 112 net
11 merchantable cubic metres per hectare (167 cubic metres per hectare total volume).

12

13 The volume trade-offs through the operational refinement process did not result in a
14 significant volume change in net merchantable volumes. Actual allocations may result
15 in slightly higher or slightly lower volumes than strategically modelled, depending upon
16 the stand-level volumes realized and the level of residual areas maintained through
17 meeting applicable guidelines, or if strategic modelling yield curve projections by forest
18 unit prove to be conservative.

19

20 Harvest volumes were calculated based on a combination of estimated yields (MIST
21 LTMD yield curves by average stand parameters by forest unit and silvicultural intensity,
22 and planned harvest volumes by MIST individual forested stand attributes). Both
23 volume calculations included estimated volumes losses for volumes left unharvested.
24 While MIST provides a good strategic estimate of volumes for LTMD, it bases all
25 calculations on the average condition for each forest unit. By using MIST stand-level
26 volumes for planned harvest volumes, the estimated operational volumes are
27 significantly more relevant at the stand and operating block level.



4.3.6 Wood Utilization

The harvest volume for the 10-year period planned harvest area is recorded by volume type, product, and species in Table FMP-14.

The total utilized volume for the plan is estimated at 6.38 million cubic metres, which is comprised of 4.29 million cubic metres of net merchantable volume and 2.09 million cubic metres of biomass volume (undersized and effect). The net merchantable volume is made up of 2.20 million cubic metres conifer and 2.09 million cubic metres of hardwood.

Estimates of unutilized species or products, which are available from the 10-year planned harvest area, are also summarized in this table. Markets are available for all allocated volume, and all species are considered merchantable at this time. There are no unutilized merchantable volumes reported in Table FMP-14.

The approval of the forest management plan is not an agreement to make areas available for harvest to a particular licensee, or an agreement to supply wood to a particular mill.

Planned harvest volumes in Table FMP-14 are grouped by Overlapping Forest Resource Licensees (OFRLs) and Sustainable Forest Licensee (SFL) contractor operations. OFRLs are projected to harvest 100% of the planned harvest volume, as the SFL does not have company operators.

Table FMP-14 presents the estimates of volume that will be utilized from the planned harvest area by fibre species and product. A portion of total stand volumes associated with the allocations will not be available at the time of harvest. Due to wildlife habitat management and the implementation of stand and site guidelines, timber volume is expected to be left on site to enhance wildlife habitat through wildlife tree retention. The company intends to utilize all merchantable, live trees from allocated stands. However, certain areas may have residual wood left on site after logging operations have been completed, due to operating conditions (inoperable) such as steep slopes, etc. The amounts to be left will be site specific, and acceptable limits will be determined through cut inspections between NDMNRF and Miisun staff.

The 10-year planned harvest volume for each mill that relies on wood supply from the Kenora Forest is recorded by species in Table FMP-15. Based on the planned harvest volume identified in Table FMP-14, the forest can supply sufficient wood fibre to satisfy all identified volume commitments.



1
2 Table FMP-15 summarizes the projected wood utilization by mill with volumes
3 subdivided by species and product committed by year. Projected deliveries to specific
4 mills were calculated based on wood supply commitments included in Appendix “E” of
5 the SFL agreement, regional wood supply calculations and consideration for mills that
6 no longer exist. The identification of “Open Market” volume in Table FMP-15 does not
7 record a surplus area or volume condition.

8
9 Weyerhaeuser (Kenora) is planned to receive 1,520,000 cubic metres of poplar during
10 the 10-year plan period to satisfy a current letter of commitment, and an additional
11 145,000 cubic metres of birch to satisfy a wood supply commitment.

12
13 Prendiville Industries Ltd. (Kenora Forest Products) - Kenora Forest Products mill shut
14 down and was sold, therefore volumes associated with the Supply Agreement are
15 included in “Open Market” volumes (1,560,000 cubic metres Spruce-Pine-Fir). The new
16 sawmill owner, GreenFirst Forest Products, plans to operate the facility, and has
17 requested a supply agreement. Kenora Forest Products volumes associated with their
18 Business Agreement will be/have been transferred to the new Kenora Sawmill owners.
19 As the facility is currently shut down, volumes associated with this Business Agreement
20 are shown as "Open Market" (3,100 m3 Red Pine – White Pine, 107,000 m3 Spruce-
21 Pine-Fir).

22
23 E&G Custom Sawing (Kenora) is planned to receive 20,000 cubic metres of white pine
24 – red pine sawlogs during the 10-year plan period to satisfy the SFL Appendix E and
25 conditions. Commitment volume for E&G Custom Sawing is projected to not be met with
26 planned red pine and white pine harvest volumes. The shortfall of 5,000 m3 is expected
27 to be made up from bridging harvest area that includes up to 374 ha of PRW forest unit
28 area (text Section 4.3.3).

29
30 An estimated additional 2.61 million cubic metres net merchantable fibre and 2.09
31 million cubic metres of undersize and defect biomass volume are projected to be
32 available on the Open Market during the plan’s 10-year period.

4.3.7 Salvage

Salvage operations in areas of natural depletion were not included in planned harvest area or volumes (Tables FMP-12 to FMP-15), nor are they counted against the available harvest area. The approved strategic modelling does not directly estimate losses on timber through natural depletions. Strategic modelling is an iterative process, that will be conducted for the next FMP (2032-2042) with an updated forest resources inventory that will account for any natural depletions that occur during this plan period.

No salvage operations are planned on the Kenora Forest at this time. If any additional natural depletions occurs during this term, that are accessible and suited to salvage harvest operations, appropriate planning and approval procedures will be followed to facilitate the salvage of the wood fibre. There is no volume report for salvage in Table FMP-14.

4.3.8 Contingency Area and Volume

During the 10-year period of the forest management plan, unforeseen circumstances may cause some of the planned harvest areas to be unavailable for harvest. In order to accommodate such circumstances, “contingency areas” for harvest have been identified. Contingency area and its associated volume has been allocated to provide operational flexibility to accommodate newly identified values or operational constraints, fluctuations in mill demand by timber species, or small natural depletions in allocated harvest areas that justifies the substitution of additional contingency areas for previously approved harvest allocations by forest unit. This contingency area will serve as a replacement area for harvest, and will be used only if needed. Contingency area has already been subjected to full public consultation and area of concern planning processes.

Sufficient contingency area was selected from the optional harvest areas identified through the operational planning harvest associated with the 2022-2032 FMP period, to support up to 24 months of harvest operations. Most of the planned contingency blocks are near current allocations, and some are near primary roads to facilitate a spring haul of wood to the mills. A variety of forest units have been allocated as contingency area.

The area and volume of the contingency area is summarized in Table FMP-16. A total of 3,731 hectares of contingency area have been identified in the management plan, with an associated total contingency volume of approx. 415,000 cubic metres (approximately 232,900 cubic metres of conifer, and 182,100 cubic metres of hardwood).



1 Reclassification of these areas from contingency to planned harvest area requires an
2 administrative amendment to the forest management plan (FMPM 2020). As selection
3 of these harvest areas are directly associated with the operationally planned harvest
4 areas in the 2022-2032 period of the LTMD, should a need arise to amend in
5 contingency blocks, these blocks are consistent with the LTMD of this plan.
6
7

8 **4.3.9 Harvest Area Information Products**

9

10 Harvest area information products provided in this FMP include:

- 11 1. A planned harvest layer – MU644_22PHR00
- 12 2. A planned residual patch layer – MU644_22PRP00
- 13 3. An area of concern layer – MU644_22AOC00
- 14 4. A FMP index map – MU644_2022_FMP_MAP_Index_00
- 15 5. A series of FMP 1:20,000 operations maps –
16 MU644_2022_FMP_MAP_OPS*****_00
17

18 Information products associated with all areas scheduled for harvest identify:

- 19 (a) the harvest block identifier;
- 20 (b) the silvicultural system;
- 21 (c) the harvest category (e.g., regular, bridging, second-pass, salvage,
22 contingency, surplus, redirected and accelerated);
- 23 (d) the operational prescriptions for areas of concern;
- 24 (e) the SGR; and
- 25 (f) if applicable, stand level residual requirements.

4.4 *Renewal and Tending Operations*

4.4.1 **Renewal and Tending Areas**

Areas for renewal and tending operations were identified and portrayed on the operations maps for the 10-year plan period. The renewal and tending areas include all of the areas selected for harvest, areas previously harvested during the term of the current and previous forest management plan that have not yet been renewed, areas of natural disturbance which require renewal, and areas which require tending.

The analysis of past silvicultural activities, conducted by a Registered Professional Forester, influenced the planned renewal and tending operations for this FMP. Silvicultural Ground Rules (SGRs) were developed to provide treatment options that would create similar future forest conditions. The analysis of past silviculture activities provided the basis for determining which treatment and forest unit combinations were most effective at producing similar future forest units. Specific stand conditions were considered as analysis units and some have unique SGRs to account for treatments that are considered most likely required to achieve the future forest condition. All treatment packages were determined based on the most likely treatment combinations needed to achieve the intended forest unit and yield curve combination. Alternatives were listed where similar results for future forest unit and yield curve could be achieved by simply choosing less common operational treatments but still considered recommended silviculture activities.

The types and levels of renewal and tending operations planned for the 10-year period are summarized by treatment in Table FMP-17. Areas of past depletions that will require a renewal or tending treatment during the plan period have also been factored into the planned renewal and tending operations in Table FMP-17.

The areas selected for renewal treatments include all areas that will be harvested during this 10-year plan period. As of April 1, 2022, there will be areas harvested from the 2012-2022 FMP that have not received renewal treatments. These additional areas, along with cutover areas that have received full or partial renewal treatments in the past, will be selected for renewal work as required. Areas requiring treatment, supplemental treatment, or re-treatment may be identified through the silvicultural success monitoring program that may not have been identified at the time of writing the FMP. These areas will not require an amendment and may be treated as per the applied or applicable SGR.



1 It was also assumed that tending treatments could potentially be conducted on areas
2 harvested at any time in the last plan period. Tending levels were estimated as a
3 proportion of the harvest area (based on historical levels and professional judgment).
4 Tending treatments will be confirmed during the preparation of each Annual Work
5 Schedule, based on conditions encountered in the field. It is the policy of the company
6 to only apply aerial chemical herbicides where absolutely required to ensure
7 regeneration success.

8
9 Information products associated with all areas scheduled for renewal, tending and
10 protection will be submitted with the Annual Work Schedule.

11
12 No two-pass harvesting is planned for this FMP.

13
14 No silvicultural trials are planned for the Kenora Forest for this 10-year plan period.
15 Should silviculture trials that are not consistent with approved SGRs be necessary they
16 will be reviewed with the NDMNRF and amended into the plan.

17
18 The identified silvicultural activities (Table FMP-17) represent a balanced silvicultural
19 program, with renewal activities slightly lower in Years 1-3 of the plan, then increasing
20 and stabilizing for Years 4 to 10 of the plan period. The lower initial level corresponds
21 to renewal of the lower harvested area from the 2012-2022 FMP in the early years of
22 this plan period, as compared to the higher planned harvest area in this 2022-2032 FMP
23 requiring treatment in Years 4-10.

24 25 **4.4.1.1 Regeneration**

26
27 A total of 145,838 hectares of harvested area is planned for regeneration in this 10-year
28 period based. Regeneration is comprised of 36,012 hectares of harvested area and
29 109,826 hectares of naturally disturbed area.

30
31 Natural Regeneration: Natural regeneration of harvested area is planned for 22,018
32 hectares during the 10-year period (61% of the renewal program of harvested area).
33 The majority of the natural regeneration area is vegetative reproduction of hardwoods
34 following conventional clearcut harvesting in the HMX, HRD and POD forest units and
35 the SBL forest unit. There are 109,826 ha. of naturally depleted, inaccessible forest
36 (Fire KEN51) in the north that will also be left for natural regeneration.

37
38 Artificial Regeneration: Artificial regeneration treatments will occur on 13,994 hectares
39 during the 10-year period, all on harvested areas. The artificial regeneration program is
40 composed of planting of 5,318 hectares during the period (15% of the renewal

1 Program on harvested area), and 8,676 hectares of aerial seeding of jack pine (24% of
2 renewal program on harvested area). Site preparation to enhance natural regeneration
3 was previously referred to as scarification however the *Forest Management Guide to*
4 *Silviculture in the Great Lakes-St. Lawrence and Boreal Forests of Ontario* (2015) does
5 not distinguish between site preparation and scarification. Site preparation to enhance
6 natural regeneration is an acceptable treatment where it can be reasonably relied upon
7 to enhance natural regeneration. These levels of planting and seeding are based on
8 the projected area harvested and consistent with model results.

9
10 Supplemental and Re-treatment: No areas are identified as needing supplemental or
11 re-treatment, however there may be unforeseen failures of either artificially or naturally
12 regenerated areas to reach the desired standard. In the case of under stocking,
13 seedlings will be planted to fill in the gaps and bring it to an acceptable level. Priority
14 will be given to higher site classes. In a rare case the area may be retreated with site
15 preparation and artificial regeneration to bring stocking to a desired level.

16
17 The proposed planting program consists of approximately 850,000 trees annually at an
18 approximate density of 1,400 trees per hectare. The actual density will vary depending
19 on site conditions. In addition to the planted trees, it is anticipated that there will be
20 ingress of natural regeneration (particularly jack pine) in planted areas. The planting
21 program is proposed to establish jack pine, black spruce, and white spruce with small
22 amounts of red pine and white pine (as per FMP objective indicator to increase red pine
23 – white pine PRW forest unit area).

24 25 **4.4.1.2 Site Preparation**

26
27 Mechanical site preparation is planned on 13,994 hectares during the 10-year period of
28 the plan. The primary implement for mechanical site preparation will continue to be the
29 power disc trencher for planting and aerial seeding. However, other methods such as
30 anchor chains or barrels and chains might be used for assisted natural regeneration or
31 prior to seeding. Those areas that have very little competition and duff may be planted
32 without any site preparation at all.

33
34 Mechanical site preparation may be done on chipper debris pads to help prepare
35 microsites planting stock to retain productive land base. No chemical site preparation is
36 planned during this FMP period.

37
38 The prescribed burning program consists of slash pile burning on 36,012 hectares of
39 harvested area during the 10-year plan period. The slash pile burning program is very
40 important because it frees up land for silvicultural treatments and minimizes losses of

1 productive forest land. Hand scalping prior to planting may also occur to assist renewal
2 in the area recovered after the slash piles are burnt. Slash piles created in blocks
3 harvested will be burned in accordance with the conditions on regular operations
4 (Section 4.2.2.2). Once exact site locations and hectares are known, the AWS will be
5 revised following the August submission and approval of the Prescribed Burn Plan for
6 Slash Pile Burning. Approximately 85 hectares of slash piles are projected to be burnt
7 each year.

8
9 In addition, Miitigoog may conduct grinding of slash piles to provide hog fuel if there is a
10 suitable market for the fibre. Grinding will be limited to areas within the Kenora Forest
11 that are in this Forest management plan or shown on the Operations Maps as eligible
12 for renewal and tending. Material available for grinding for use as hog fuel will be
13 contained within slash piles at roadside that would normally be included for slash pile
14 burning, or in bush chipper debris piles.

15 16 **4.4.1.3 Tending**

17
18 Areas that have been previously planted or seeded, and exhibit heavy grass, shrub or
19 hardwood competition, will be selected for tending treatments during the plan period.
20 Tending may be done by cleaning (manual, mechanical, chemical or prescribed burn) or
21 spacing. Ground application of chemical tending is forecast to occur on 2,341 hectares
22 during the 10-year period. Potential areas for tending treatments will be submitted in
23 Annual Work Schedules.

24
25 No juvenile spacing or commercial thinning is proposed during the plan period.

26
27 At the end of this 10-year plan period (2022-2032) there will be approximately 8,000
28 hectares that will require silvicultural treatment in the first two years of the 2032-2042
29 plan. This area represents the areas harvested in the last two years of this plan.

30 31 **4.4.1.4 Planned Treatments by Forest Unit**

32
33 The Silvicultural Ground Rules for each forest unit are recorded in Table FMP-4. The
34 most common treatment package and other acceptable treatments are documented.
35 During the preparation of the Annual Work Schedules and Forest Operations
36 Prescriptions, the company will review all identified values, and confirm that proposed
37 renewal activities are planned so that all known values are protected.

4.4.2 Renewal Support

Renewal support includes activities such as tree improvement operations, tree seed collection and planting stock production that will be conducted during this plan period. These activities are discussed in the following sub-sections.

4.4.2.1 Tree Improvement

Miitigoog is actively involved with other forest industry companies in the Superior-Woods Tree Improvement Association (SWTIA). Collectively, SWTIA manages the tree improvement program in Northwestern Ontario with the goal of providing improved tree seed for seedling production. Tree improvement can increase both the volume and value of future forest crops. The short-term objective of tree improvement is to replace 100% of seedling production general seed with improved seed from current orchards. The long-term objective is to achieve greater gains in growth and form of jack pine, black spruce and white spruce through breeding and field tests of superior families. Jack pine, black spruce, and white spruce programs are active for the Kenora Forest.

First generation seed orchards have been established on the Kenora Forest for black spruce (at Minnisabic Lake) and jack pine (at Fifth Creek). The location of the seed orchards are shown on the operations maps. The jack pine and black spruce orchards have been rogued to less than 75% in recent years. Improved seed has been collected from both orchards and will be used in the planting program as much as available.

Tree improvement activities may include fertilization of the jack pine seed orchard at Fifth Creek – to be determined at the Annual Work Schedule stage.

All tree improvement areas have been mapped on the operational 1:20,000 maps (electronic FMP operations maps) and are illustrated on the Values Map.

4.4.2.2 Seed Collection and Planting Stock Procurement

Miitigoog is responsible for seed collection, planting stock planning, procurement and payment.

The cone collection program will include the collection of seed for the production of black spruce, white spruce, jack pine, red pine and white pine planting stock (Table 48). To support future planting and seeding for this 10-year plan period, a total approximately 270 million seeds are required. The jack pine seed is mainly used in the aerial seeding program, with a lesser portion used for planting stock production. Current

1 inventories of seed are adequate. Miitigoog may initiate a seed collection program for
2 red pine or white pine if seed crop conditions are favourable.

3

4 **Table 48 Tree Seed Collection Forecast 2022-2032**

5

Species	SEED REQUIREMENT FORECAST (thousands of seeds)										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	TOTAL
Pj seed (Zone 11)	26,468	26,274	26,448	26,508	26,364	26,388	26,346	26,412	26,364	26,388	263,960
Sb seed (Zone 11)	311	456	264	228	468	384	312	288	312	360	3,383
Sw seed (Zone 11)	228	246	240	240	180	168	324	282	318	245	2,471
Pr seed (Zone 9)	43	36	48	42	36	42	34	30	36	42	389
Pw seed (Zone 9)	-	36	49	40	12	36	24	42	24	24	287
TOTAL SEED	27,050	27,048	27,049	27,058	27,060	27,018	27,040	27,054	27,054	27,059	270,490

6

7

8 Planting stock will be procured from container nurseries under contract to Miitigoog.
9 The planting stock will consist entirely of container stock produced under contract with
10 private growers. The planting stock will be monitored to ensure it meets the minimum
11 specifications in the contract. Seedlings will be monitored for survival. Planting stock
12 procurement for this forest management plan will be completed annually, one year in
13 advance of planting. A mixture of seedlings consisting of black spruce, white spruce,
14 jack pine, red pine and white pine will be ordered depending on the areas planned for
15 harvest the following year. Approximately 850,000 seedlings are scheduled for annual
16 production for the planting program, used for the planting of over 8.5 million trees during
17 this 10-year plan period (Table 49). No planting stock procurement shortfalls are
18 anticipated during this 10-year plan period.

19

20 **Table 49 Planting Stock Forecast 2022-2032**

21

Species-stock	PLANTING STOCK FORECAST (thousands of seedlings)										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	TOTAL
Pj container	367	205	350	400	280	300	265	320	280	300	3,067
Sb container	259	380	220	190	390	320	260	240	260	300	2,819
Sw container	190	205	200	200	150	140	270	235	265	204	2,059
Pr container	36	30	40	35	30	35	28	25	30	35	324
Pw container	-	30	41	33	10	30	20	35	20	20	239
TOTAL	852	850	851	858	860	825	843	855	855	859	8,508

22

4.5 Roads

The planning requirements for new primary, branch, and operational roads that are required to access harvest areas, including contingency area that will be constructed during the 10-year period of the forest management plan are described in Section 4.5.1 Primary and Branch Roads and Section 4.5.2 Operational Roads.

Documentation of the environmental analysis of the alternative corridors for each new primary road corridor, the rationale for the selected corridor, and associated use management strategy, are included in Supplementary Documentation H – Road Planning.

This text section also documents planning requirements for:

- Section 4.5.3 - Areas of Concern Crossings by new primary and branch roads

- Section 4.5.4 - Areas of Concern Crossings by new operational roads

- Section 4.5.5 - Existing roads

- Section 4.5.6 - Road Water Crossings

- Section 4.5.7 - Forestry aggregate pits

- Section 4.5.8 - Wood Storage Yards

- Section 4.5.9 - Conditions on Roads, Landings, and Aggregate Pits

The planning of roads has been completed by the Plan Author and Miisun General Manager, both are Registered Professional Foresters, with direction and assistance from the Miitigoog Forest Operations Committee. Commitments and agreements made with stakeholders during the 2012-2022 FMP regarding roads are carried forward into this 2022 FMP.

4.5.1 Primary and Branch Roads

The *Forest Management Planning Manual* (MNRF, 2020) defines a primary forest access road as a road that provides principal access for the management unit, and is constructed, maintained and used as the main road system on the management unit. Primary roads are normally permanent roads, although there may be significant periods of time when specific primary roads are not required for forest management purposes. Branch roads are roads, other than primary roads, that branch off an existing or new primary or branch road, providing access to, through or between areas of operations on a management unit.

1
2 The provision of access is a key strategy to meet the objectives of this plan. The road
3 construction program has been designed to provide efficient access to the forest while
4 minimizing conflicts with other users through the strategies outlined in the plan.

5
6 Each planned new primary road required for the twenty-year period (2022-2042) is
7 identified in Table FMP-18 along with the use management strategy for the road. The
8 length of road to be constructed during the 10-year period of the forest management
9 plan is also recorded in FMP-18. The planned corridor for each primary road is
10 portrayed on the associated operational maps and Operational Planning Inventory (OPI)
11 Planned Road Corridor layer. Mapped primary road corridors also identify the portion of
12 the corridor within which a road is planned for construction during the 10-year period of
13 the plan.

14
15 No roads are planned that traverse a provincial park nor a conservation reserve.

16
17 Final locations of the one-kilometre wide corridors for primary roads are based on the
18 environmental analysis of alternative corridors and public comments received during the
19 planning process. Primary road use management strategies were also finalized after
20 public consultation. The rationale for the proposed corridor and the associated use
21 management strategy are documented in Supplementary Documentation H – Road
22 Planning.

23
24 The following is a list of Primary and Branch Roads that are planned to have
25 construction within this FMP period.

26
27 **PRIMARY ROAD CORRIDORS:**

28	Atikwa Lake Road	31	Namego Lake Road
29	Aulneau Road	32	Weisner Road
30	Flapjack Road	33	Westway Road

34
35 **BRANCH ROAD CORRIDORS:**

36	Avalon Road	42	Hidden Lake Road
37	Bays Road	43	India Road
38	Beaver House Road	44	Quida Lake Road
39	Cedartree Road	45	Roxy Road
40	Flora Lake Road	46	Turtle Lake Road
41	Goshawk North Road	47	White Road

48
49 Each of the roads identified above are planned for construction to access harvest areas
50 in the current FMP or to access harvest areas associated with future allocations. Some

1 of these roads are being carried over from the 2012-2022 Kenora Forest FMP. Some
2 primary roads are extensions of existing roads or major upgrades to existing roads and
3 are documented in Supplementary Documentation H. The SFL intends to maintain
4 responsibility for all new roads constructed.

5
6 Primary and branch roads are generally open to public travel except where access may
7 have negative effects on remote tourism or waterway parks or other stakeholder
8 concerns. These roads are restricted via *Public Lands Act* signage. Roads must be
9 constructed according to the *Forest Management Guide for Conserving Biodiversity at*
10 *the Stand and Site Scales* that lists the standards and guidelines for planning,
11 constructing and maintenance of roads to minimize negative effects on water quality.

12
13 When harvest and renewal operations are completed, identified primary and branch
14 roads will be (a) decommissioned or access restricted as agreed to within RSAs, as
15 prescribed by the NDMNRF, or as agreed to during our regular consultation process
16 with interested and affected persons; or (b) considered for transfer of responsibility to
17 the NDMNRF, or as part of the transfer process to a third party. Road decommissioning
18 or temporary (winter) roads are preferred in order to limit the loss of productive land to
19 roads (See Section 4.5.8 Conditions on Roads, Landings and Aggregate Pits – Loss of
20 Productive Land). Primary and branch roads are a vital to the success of the forest
21 industry. The complete deconstruction or decommissioning of primary or branch roads
22 will be used sparingly on the Kenora Forest as these roads are expected to have uses
23 over many plan periods. The SFL intends to maintain responsibility for the vast majority
24 primary and branch roads it builds, and the application of decommissioning or access
25 restriction conditions will be implemented in such a manner that will allow future use of
26 the road for forestry purposes to occur with minimal costs to upgrade (i.e. berming or
27 signage).

28 29 Rationale for Primary Roads:

30
31 **FINAL PLAN NOTE:** Due to the 2021 wildfires in the northern portion of the Kenora
32 Forest, the Caribou Falls, Umfreville, Sydney East and Sydney West primary roads
33 were deleted from the final FMP. These roads will not be constructed in this 2022-2032
34 FMP period, nor in the next 20-years.

35
36 **Atikwa Lake Road** will provide the main access to the east side of Atikwa Lake.
37 The Atikwa Road will commence from the end of the Foreleg Bay Road, which is
38 part of the access restricted Maybrun Road system, as such this road will also be
39 access restricted under the PLA. The road will then progress north along the east
40 side of Atikwa lake. This road will cross the boundary of the Kenora Forest and
41 Wabigoon Forest at least once due to terrain.

1
2 This road may have access constructed at the north end from the Wabigoon
3 Forest and this could temporarily create a "loop" road situation. Where the road
4 does cross onto the Wabigoon Forest it will be posted as a closed road under the
5 Public Lands Act (PLA).

6 Following the completion of operations accessed by the Atikwa Road this road will
7 be decommissioned to the satisfaction of the joint SFL/NDMNR compliance
8 working group.

9
10 This road is located within CLUPA General Use Area #2550, which states that
11 "This area will be managed for resource extraction and commercial tourism in a
12 manner which recognizes the importance of sport fishing and the lake trout
13 environment.

14
15 **Aulneau Road** will provide the main seasonal access to the Aulneau Peninsula.
16 The Aulneau peninsula has an enhanced management plan that restricts access to
17 seasonal (winter only); this road will follow those restrictions. Currently the corridor
18 extends to the highway along the existing access road. This road will only be
19 upgraded to a primary road status once construction begins on either alternative
20 for the Turtle Lake crossings.

21
22 **Flapjack Road** is an existing branch road in the 2012 Kenora FMP that is planned
23 for upgrade to primary and a 6-kilometer extension. This upgrade and extension
24 will provide access to numerous proposed blocks in the Gavigan Lake area.

25
26 **Namego Lake Road** is providing the main access to the area between the English
27 River Road and the East side of Sand Lake. This area has a large amount of jack
28 pine allocations and will be a vital wood source for the entire 10-year plan. The
29 access into this area is expected to start within the first operating year (2022).
30 Following stakeholder negotiations, the starting point for this road shifted from
31 Alternative #1 (shown at Stage 3 – Proposed Operations) to Alternative #2. This
32 alternative was selected due to the large water crossing at the beginning of the
33 road that could help control highway vehicle traffic in the area, through removal of
34 the first water crossing structure (bridge), once operations are completed.

35
36 **Weisner Road** will provide access to harvest area on the northeast side of Kakagi
37 Lake. This road is restricted access under the PLA, as it will be part of the
38 Cameron Lake Road system. Construction of the Weisner Lake road is anticipated
39 to begin within the first two years of plan implementation and operations will
40 continue throughout the entire 10-year period of the FMP.

1
2 **Westway Road** is the only access onto the Western Peninsula. This corridor has
3 been carried over from the 2012 FMP for the most part, with an adjustment to the
4 end of the corridor to reflect input from an Indigenous Community during the
5 implementation of the 2012 FMP. This road will remain a winter only road as is
6 currently the direction in CLUPA.

7
8 Rationale for Branch Roads:

9
10 **Avalon Road** is a reconstruction of existing operational road. Currently this road
11 is being used for access to the Avalon mining site. The Avalon Road will provide
12 access to the southeast section of MEA4.

13
14 **Bays Lake Road** is required to access an area between Bays Lake and Sum
15 Lake. This area will not create a loop road with the Roxy Road. It is anticipated
16 that the entire area will be harvested during the 2022 FMP period, but that
17 operations may be continued over an extended period as this area will provide a
18 suitable location for operations during half load restrictions and spring and fall
19 transition periods.

20
21 **Cedartree Road** is required to access five harvest blocks to the south of the
22 Cameron Lake Road. This road will be utilized during spring break-up as there are
23 no half-loading restrictions in the area.

24
25 **Flora Lake Road** will provide access to allocations north of the Maybrun Road.
26 The Flora Road is expected to provide access for this FMP, as well as the 2032-
27 2042 Kenora FMP period. There is also the potential that the Flora Road will be
28 utilized to provide access to the Whiskey Jack Forest south of Warclub Lake. This
29 road will be subject to the same PLA access restrictions as the Maybrun Road. As
30 this road has restricted access the Planning Team proposed harvest to shoreline in
31 this area.

32
33 **Hidden Lake, India and Roxy Roads** will provide continued access to allocations
34 off the proposed Namego Lake primary road. All three of these roads are
35 scheduled to be constructed during the second half of the 2022 FMP.

36
37 **Quida Lake Road** and **Turtle Lake Road** are both required to provide access from
38 highway #71 onto peninsulas on Lake of the Woods. These roads originate from
39 the same location near Onigaming First Nation with Turtle Lake Road continuing
40 mostly westwardly and Quida Road travelling south and then west onto the

1 Sabaskong Peninsula. These roads will be used to access allocations for the
2 duration of the 2022 FMP. The Quida Lake Road and Turtle Lake Road will both
3 be identified for decommissioning following the completion of silviculture activities
4 (e.g. a berm will be placed near the start of each road as agreed through
5 consultation to help prevent access via highway vehicles). This decommissioning
6 is as a result of stakeholder comments following Stage 3 – Proposed Operations.
7

8 **Snook Lake Road** is a historic road on the landscape. This road was previously
9 decommissioned (water crossings removed), but the roadbed remains intact. The
10 Snook Lake Road is intended to be restored to a branch road to provide access to
11 allocations north of the Sand Lake Road and adjacent to Tourist Lake. The
12 reconstruction of this road is scheduled to be completed within the first two years
13 of the FMP.
14

15 **White Road** is an extension of the current White Road. This road will cross the
16 CN rail line and access a large area of allocations to the north of the tracks. This
17 road is vital because it provides all season access to fibre that may otherwise need
18 to flow north to the Cygnet Lake Road, thus becoming a winter only operation.
19

20 During the 2022-2032 FMP period, no primary road nor branch roads are being
21 considered for transfer to the NDMNRF. As per direction in the Kenora Forest 2012-
22 2022 FMP, the Ena Lake Road Extension and Talbot Road will both be
23 decommissioned following the completion of all operations.
24

25 Where a new primary road, branch road or landing does not intersect an area of
26 concern for a value, any conditions on the primary road, branch road or landing as
27 described in NDMNRF's guide(s) (e.g. guide relating to conserving biodiversity at the
28 stand and site scales) will be followed as included in Section 4.5.8.

4.5.2 Operational Roads

Operational roads are roads, other than a primary or branch roads that provide short-term access for harvest, renewal and tending operations. Operational roads are normally not maintained after they are no longer required for forest management purposes, and are often decommissioned or left to regenerate naturally.

Table FMP-18 lists the new and existing operational roads or road networks that will be required for the 10-year plan period. Planned construction, maintenance, monitoring, access control and future use management are recorded in the table. Any extensions to existing roads (construction during the plan period), or changes to the use management strategy for an existing road are documented in Table FMP-18.

The areas within which new operational roads are to be constructed will be identified by **operational road boundaries** (ORBs). An operational road boundary identifies the perimeter of the harvest area and the area from an existing road or planned road corridor to the harvest area. Operational road boundaries for the FMP are identified on the operations maps and shown in the legend as “Operational Road Boundary”.

Each operational road boundary, within which an operational road will be constructed, and the associated use management strategy (RUS) for the road(s) is recorded in Table FMP-18 applied. Documentation of the use management strategy for each operational road or networks of operational roads is included in Supplementary Documentation H Operational roads will be built in the most appropriate location to facilitate harvest.

Where a new operational road or landing does not intersect an area of concern (AOC) for a value, any conditions on the operational road or landing as described in NDMNRF’s *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (MNRF, 2010) will be documented in the forest management plan. These conditions on roads, landings and forestry aggregate pits are shown in Section 4.5.9.

New road use strategies were developed for both existing and new roads. The use management strategy identifies: the type of road maintenance during the plan period; how monitoring activities will be carried out; and, any access provisions or restrictions. The three road use strategies are summarized and are listed below:

RUS-1 *Transfer Road to the NDMNRF*

RUS-2 *Decommission Road*

RUS-3 *Access Restriction*



- 1 **RUS-4** *SFL Retains Road*
- 2 **RUS-5** *MEA Access Restriction*
- 3 **RUS-6** *MEA No Access Restriction*
- 4

5 Detailed information on each strategy can be found in Supplementary Documentation H.
6 The operational road boundaries are delineated on the 1:20,000 Operational Maps.
7

8 **4.5.3 Area of Concern Crossings – Primary and Branch Roads**

9

10 This section documents the planning requirements that were applied to each crossing of
11 an area of concern (AOC) by a proposed corridor for a new primary or branch road.
12 These AOC crossings are planned for the portion of the road that will be constructed
13 during the 10-year plan period.
14

15 The review and approval of the construction and decommissioning of water crossings
16 will be in accordance with direction in the *Ministry of Natural Resources and*
17 *Forestry/Fisheries and Oceans Canada Protocol for the Review and Approval of*
18 *Forestry Water Crossings* (included as FMP Supp. Doc. O). For each new primary and
19 branch road water crossing to be constructed, the location, crossing structure and
20 conditions on construction will be finalized in the applicable AWS (Part D, Section 3.2.3,
21 2020 FMPM) in accordance with this protocol. The decision framework in Supp. Doc. O
22 will be used to assist in determining crossings that require an NDMNRF, and if
23 necessary, a Department of Fisheries and Oceans (DFO) review. Any approved water
24 crossing standards from this protocol that will be used during forest operations are
25 documented in Supplementary Documentation O. In addition to the applicable
26 construction conditions, all applicable water crossing standards will be documented in
27 Table AWS-1 by their water crossing standard identifier. In instances where a water
28 crossing standard does not exist or an approved water crossing standard cannot be met
29 in its entirety, an NDMNRF review is required. The water crossing standards represent
30 additional measures to the specific conditions on the construction, use, and
31 decommissioning of water crossings in Table FMP-11 as per the water crossing
32 standards and guidelines in the Stand and Site Guide (Pages 136-141) and NDMNRF's
33 *Crown Land Bridge Manual*.
34

35 Table FMP-11 includes a notation of whether any public comments were received
36 concerning a crossing of an area of concern by a primary or branch road. Where
37 primary or branch roads cross the above AOCs, the rationale for the crossing is
38 documented in Supplementary Documentation I – Areas of Concern Planning.
39 Supplementary Documentation I also includes references to any public comments

1 received and how they were considered in the AOC prescription (Supplementary
2 Documentation I - Part B, Section 3).

3
4 No roads are planned that traverse a provincial park nor a conservation reserve.

5
6 Public comments or business-to-business discussions specific to primary and branch
7 road crossings of AOCs took place and resulted in some changes to primary or branch
8 road crossings of AOCs, such as:

- 9 - Namego Lake Road corridor was realigned during planning for operational
10 reasons stakeholder concerns and the roads potential proximity to a high-
11 value tourist lake;
- 12 - Namego Lake Road and India Road will both cross portage trails. These trails
13 were identified during Stage 3 and the protection of the value addressed; and
- 14 - Adjustment of road centerline location for India Road, between India and
15 Dummy Lakes.

16

17 Other general comments were received about road construction, road
18 decommissioning, and certain road use strategies but were not specific to road
19 crossings of AOCs (not applicable).

20

21 The review and approval of the construction and decommissioning of water crossings
22 will be in accordance with the direction in the Ministry of Natural Resources and
23 Forestry/Fisheries and Oceans Canada Protocol for the Review and Approval of
24 Forestry Water Crossings (the Protocol)(Supp. Doc. O). For each new primary and
25 branch road water crossing to be constructed, the location crossing structure and
26 conditions on construction will be finalized in the applicable AWS (Part D, Section 3.2.3)
27 in accordance with the Protocol.

28

29 The decision framework in the Protocol will be used to assist in determining crossings
30 that require NDMNRF, and if necessary, a Department of Fisheries and Oceans (DFO)
31 review. Any approved water crossing standards from this Protocol that will be used
32 during forest operations are documented in Supplementary Documentation O. In
33 addition to the applicable construction conditions, all applicable water crossing
34 standards will be documented in Table AWS-1 by their water crossing standard
35 identifier. In instances where a water crossing standard does not exist, an approved
36 water crossing standard cannot be met in its entirety, or where an operational
37 management zone (OMZ) related to fisheries has identified a need for NDMNRF review
38 and approval, an NDMNRF review is required.

39

- 1 As per the Protocol, an OMZ for fisheries has been established on the Kenora Forest.
2 The Vermilion Lake OMZ is being implemented in an effort to protect the water system
3 from excessive sedimentation and increased angler pressure. Rationale and
4 documentation for the implementation of the OMZ, as well as a map, can be found in
5 Supplementary Documentation Q - Vermilion Lake Operational Management Zone.
6
- 7 The water crossing standards represent additional measures to the specific conditions
8 on the construction, use, and decommissioning of water crossings in Table FMP-19 as
9 per the water crossing standards and guidelines in the Stand and Site Guide and
10 NDMNRF's Crown Land Bridge Manual.
11
- 12 All AOC crossings are identified on operational maps as a display of the overlap of the
13 planned road corridor boundary and the overlapping AOC boundary. Where new water
14 quality values are identified during plan implementation, a values update will be
15 completed and submitted to the NRIP portal in order to document the value within the
16 plan. No amendment is required for values updates.

4.5.4 Area of Concern Crossings – Operational Roads

For operational road crossings of areas of concern, the conditions on construction of the crossing(s) for individual areas of concern are documented in Table FMP-11, and where practical, portrayed on the operations maps. Any conditions on a landing within an area of concern are also documented in Table FMP-11.

For new operational road crossings of areas of concern, any necessary conditions on the location(s) and/or construction of the crossings are identified for individual areas of concern or groups of areas of concern. The determination of the conditions involved consideration and documentation of:

- (a) natural resource features, land uses and values, as identified on the values map for the management unit;
- (b) the results of consultation with interested and affected persons and organizations; and
- (c) potential preventive and mitigative measures.

Any public comments that were received concerning a crossing of an area of concern by an operational road, the receipt of comments are noted in Table FMP-11.

The following summarizes issues raised in public comments for operational road crossings of AOCs:

- AOC Tar** – Tourism – High Volume Tourism Access Road
- AOC Tnr** – Tourism – No Operational Road Zone
- AOC T04** – Tourism – Road Aesthetics

In addition to addressing public comments, certain operational roads or operational road boundaries were realigned to avoid an AOC crossing by the operational roads. Operational road boundaries in the Deacon Creek and Octopus Creek areas were adjusted to address public comments regarding the crossing of these two systems.

Other general comments were received about road construction, road decommissioning, and certain road use strategies but were not specific to road crossings of AOCs (not applicable). All AOC crossings are identified on operational maps as a display of the overlap of the planned operational road boundary and the overlapping AOC boundary.

- 1 The review and approval of the construction and decommissioning of water crossings
2 will follow the *Ministry of Natural Resources and Forestry/Fisheries and Oceans Canada*
3 *Protocol for the Review and Approval of Forestry Water Crossings* (included in Supp
4 Doc. O).
- 5
- 6 As per the Protocol, an OMZ for fisheries has been established on the Kenora Forest.
7 The Vermilion Lake OMZ is being implemented in an effort to protect the water system
8 from excessive sedimentation and increased angler pressure. Rationale and
9 documentation for the implementation of the OMZ, as well as a map, can be found in
10 Supplementary Documentation Q - Vermilion Lake Operational Management Zone.
- 11
- 12 The water crossing standards represent additional measures to the specific conditions
13 on the construction, use, and decommissioning of water crossings in Table FMP-19 as
14 per the water crossing standards and guidelines in the Stand and Site Guide and
15 NDMNRF's Crown Land Bridge Manual.
- 16
- 17 For each new operational road water crossing to be constructed, the location, crossing
18 structure and conditions on construction will be finalized in the applicable AWS (Part D,
19 Section 3.2.3, 2020 FMPM) in accordance with the protocol. Where new water quality
20 values are identified through plan implementation a values update will be completed
21 and submitted to the NRIP portal in order to document the value within the plan. No
22 amendment is required for values updates.

4.5.5 Existing Roads

There are approximately 600 kilometres of permanent roads existing on the Kenora Forest at the start of this plan (SFL, NDMNRF, and private roads based on the RUS). Background information on existing roads on the Kenora Forest was compiled during the early stages of plan development and was available for public review at subsequent stages of public consultation. Existing roads include historical primary and branch roads in addition, to historical tertiary roads, which are labelled as operational roads.

Each existing road or road network that is the responsibility of the sustainable forest licensee, and other existing roads that will be used for forest management purposes and which are under the jurisdiction and control of NDMNRF, are documented in Table FMP-18. The associated road use management strategy for each existing road or road network, including the transfer of road responsibility and decommissioning, is also documented in Table FMP-18.

Documentation of new or revised use management strategies, and the associated rationale, is included in the Supplementary Documentation H. All roads information for the FMP is included in a single GIS layer submitted electronically with the plan.

If an existing road and/or landing is planned to be used for forest management purposes during the period of the forest management plan, and the road and/or landing intersects an areas of concern for a value, Table FMP-11 identifies if there are conditions on the road and/or landing.

If an existing road and/or landing is planned to be used for forest management purposes during the period of the forest management plan, and where the road and/or landing does not intersect an area of concern for a value, conditions on the road and/or landing as described in NDMNRF's guide entitled *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (MNR, 2010) are documented in Section 4.5.9 (Conditions on Roads, Landings and Aggregate Pits).

If the sustainable forest licensee intends to transfer responsibility for an existing road to NDMNRF during the next 20 years, a preliminary indication of the management intent for the road or road network is documented in Table FMP-18. If the sustainable forest licensee plans to transfer the responsibility for a road during this 10-year period, the actions required prior to transfer, including potential removal of water crossings, are documented in Table FMP-18. These conditions and action are a "best estimate" at the time of planning. Through assessments of use, consultation with the public, and/or discussions with the NDMNRF differing conditions may be met. If the applied actions

1 and conditions are different than reported in FMP-18 no amendment will be required. If
2 a RUS change is required an amendment will be required. There are no roads planned
3 for a transfer of responsibility during this 10-year plan period.
4

5 Many operational roads will be decommissioned the same year that they are built. In
6 particular, winter operational roads that are not required for operations further beyond
7 the block being harvested. In addition, many roads will be decommissioned through site
8 preparation, prior to planting, within two years of harvest completion to minimize the
9 loss of productive land. The use management strategies for these road networks are
10 summarized in Supplementary Documentation H – Road Planning (Section D, RUS-2).
11 Methods of inspections will include travel by ½ ton truck primarily by company staff, but
12 could include contractors, NDMNRF and/or the public or occasionally by ATV, aircraft,
13 aerial/satellite photography or drone flight if access restrictions prevent ½ ton truck
14 access.
15

16 **Road Responsibility Transfer Procedure**

17

18 The following procedure is not required in all harvest blocks; however, forest managers
19 may consider whether access roads should be transferred to NDMNRF (or another
20 party) or retained by the SFL. Items to consider include type, timing, and ability to
21 conduct site preparation, regeneration, forest renewal monitoring or forest protection.
22

23 A road is defined in Section 48 of the *Public Lands Act (PLA)* as “a road or part of a
24 road on public lands and includes the bridges, shoulders, ditches and right-of-way
25 thereof, but does not include the King’s Highway or a secondary highway, or an
26 industrial road designated under the *Public Transportation and Highway Improvement*
27 *Act*, or a road under the jurisdiction of a statue labour board or a local roads board
28 *R.S.O. 1990, c. P.43 s.48; 2010, c. 16 Sched. 10, s.4(6,7).*” For the purpose of forest
29 management, MNR includes existing roads and water crossings as those that fall
30 within this PLA, s.48 definition of a road and are reasonably capable of providing access
31 for licensed highway vehicles.
32

33 When a road is proposed to be transferred back to the NDMNRF, the following
34 procedure will be followed:

- 35 1. Roads proposed to be transferred are identified in Table FMP-18 or an AOC
36 Prescription in the current Forest Management Plan.
- 37 2. When existing roads are to be transferred, they will be identified in an Annual
38 Work Schedule (AWS).
- 39 3. NDMNRF and the SFL will verify the preliminary road use management strategy
40 (RUS) or an AOC prescription intent has been achieved.

- 1 4. NDMNRF and the SFL will collaboratively assess the transfer requirements; as 1
2 per sections 5.1.1.3 and section 5.1.2.3 of the Stand and Site Guide (SSG) 2
3 regarding evaluation criteria.
- 4 5. Any water crossings to be removed will be revised to or identified in the
5 subsequent AWS.
- 6 6. The appropriate AR will document when/what transfer requirement activities have
7 6 been carried out, in order to complete the transfer tracking documentation.
- 8 a. **Transferred roads** are to reflect the change in responsibility to NDMNRF
9 or to a Third-Party.
- 10 b. **Decommissioned roads** have physical barriers limiting access by a 4x4
11 half-ton truck and promotes regeneration of forest cover are then
12 classified as “decom” and will not be shown on future map products
13 (existing roads data). The SFL is deemed to have completed their
14 decommissioning responsibility once the physical barrier has been
15 installed. The SFL is not responsible to maintain the physical barrier in
16 perpetuity.
- 17 c. **Natural Abandonment** roads will not be maintained and naturally
18 degrades.
- 19 7. The approved AR signifies the roads transfer documentation meets NDMNRF
20 requirements and is complete.

21
22 Where a silvicultural prescription can be determined prior to harvesting operations
23 leaving the block, and where future access may not be required (i.e. natural
24 regeneration), access roads may be restricted to half-ton traffic before equipment
25 leaves the area. This allows the SFL to look for opportunities and efficiencies where
26 operational roads can be decommissioned promptly, benefitting from having equipment
27 on site.

28



1 4.5.5.1 Road Information Products

2

3 For each existing road or road network that is the responsibility of the sustainable forest
4 licensee, and other existing roads that will be used for forest management purposes
5 and which are under the jurisdiction and control of NDMNRF, information products
6 associated with road construction, maintenance, monitoring, access controls and
7 decommissioning are provided that identify:

8

- 9 (a) the corridors for primary roads (20 years);
- 10 (b) the corridors for primary and branch roads planned for construction (10 years);
- 11 (c) the operational road boundaries (10 years);
- 12 (d) the areas of concern within the corridors for primary and branch roads,
13 operational road boundaries, and the areas of concern that intersect existing
14 roads;
- 15 (e) the roads that will be maintained;
- 16 (f) the roads and associated water crossings that will be monitored;
- 17 (g) the segments of roads that currently have access controls and the segments of
18 roads where new access controls are scheduled, and the type of access control
19 activities; and
- 20 (h) the segments of roads that will be decommissioned, and the type of
21 decommissioning activities.

22

23 Information products associated with all areas scheduled for road construction,
24 maintenance, monitoring, access controls and decommissioning portray:

- 25 (a) the corridors for primary roads (20 years)
- 26 (b) the corridors for primary and branch roads (10 years);
- 27 (c) the operational road boundaries (10 years);
- 28 (d) the areas of concern within the corridors for primary and branch roads,
29 operational road boundaries, and the areas of concern that intersect existing
30 roads;
- 31 (e) the segments of roads that currently have access controls and the segments of
32 roads where new access controls are scheduled; and
- 33 (f) the segments of roads that will be decommissioned.

34

35 Relevant maps are included in the FMP as MU644_2022_FMP_MAP_Index_00 and a
36 series of FMP 1:20,000 operations maps MU644_2022_FMP_MAP_OPS*****_00
37 maps.



4.5.6 Roads Water Crossings

The water crossings standards to be implemented will be in accordance with direction in the *Ministry of Natural Resources and Forestry/Fisheries and Oceans Canada Protocol for the Review and Approval of Forestry Water Crossings* (included as Supp. Doc. O). Any approved water crossing standards from this protocol that will be used during forest operations are documented in Supplementary Documentation O.

4.5.7 Forestry Aggregate Pits

Forestry Aggregate Pits are exempt from the requirement for an aggregate permit under the *Aggregate Resources Act* (ARA) if they meet the exemption criteria for a Forestry Aggregate Pit as per Part A, Section 1.3.6.6 of the *Forest Management Planning Manual* (2020). The extraction of aggregate from Forestry Aggregate Pits for use on forest access roads on the management unit will comply with the exemption criteria as outlined below:

Exemption Criteria

Under Section 8 of Ontario Regulation 244/97 made under the *Aggregate Resources Act*, a person who operates a pit while conducting forest operations on Crown land on behalf of the Crown or under the authority of a forest resource license and in accordance with a FMP approved under the CFSA is exempt from subsection 34(1) of that Act, as amended from time to time (i.e., the requirement for an aggregate permit to operate a pit). The following criteria will apply to a forestry aggregate pit:

- The aggregate is required for a forest access road in a management unit;
- Aggregate is extracted:
 - (a) no closer than 1.5 metres above the established groundwater table; or
 - (b) closer than 1.5 metres above the established groundwater table if:
 - (i) the proposed site is remote or isolated; and
 - (ii) the excavation limit of the site is not within:
 - 500 metres of a coldwater stream;
 - 1,000 metres of a water well, whether dug or drilled; and
 - 5,000 metres of a receptor (e.g., residence or facilities where people sleep {nursing homes, hospitals, trailer parks, camping grounds}; schools; day-care centres);

- 1 • The pit is established within:
 - 2 a. An approved new primary or branch road corridor in the FMP, and identified
 - 3 the Annual Work Schedule;
 - 4 b. An approved area of operations in the FMP, and identified in the Annual Work
 - 5 Schedule;
 - 6 c. An approved operational road boundary in the FMP, and identified in the
 - 7 Annual Work Schedule; or
 - 8 d. An approved aggregate extraction area in the FMP, and identified in the
 - 9 Annual Work Schedule located within 500 metres of an existing forest access
 - 10 road.

11
12 Forestry Aggregate pits that satisfy these criteria are referred to as “Forestry Aggregate
13 Pits”.

14 Aggregate Extraction Areas

15
16
17 Aggregate extraction areas are areas where a Forestry Aggregate Pit may be
18 established. They must be within 500 metres of: an existing forest access road,
19 approved operation areas, operational roads boundaries, primary road corridor, or a
20 branch road corridor. Conditions on aggregate pit within AOCs are identified in Table
21 FMP-11. Conditions on Roads, Landings and Forestry Aggregate Pits (CORLAPs) for
22 conditions outside of AOCs are identified in Section 4.5.8. The criteria for a Forestry
23 Aggregate Pit apply as per Part A, Section 1.3.6.6 of the FMPM (2020).

24 25 Conditions on Forestry Aggregate Pits

26
27 All existing Forestry Aggregate Pits will be identified in each AWS. If a Forestry
28 Aggregate Pit is within an AOC, Table FMP-11 identifies if there are conditions on the
29 development or use. Table FMP-11 documents the conditions on operations beyond
30 the Operational Standards outlined below. The operational standards described below
31 apply to the extraction of aggregate resources for Forestry Aggregate Pits:

32
33 It is recognized that these planned aggregate extraction areas (AEAs) may be large,
34 however this is needed as the detailed, surficial geological inventories which specify
35 areas containing suitable gravel across the Kenora Forest are not always accurate
36 (coarse scale) or available, therefore specific areas are not always known. If the
37 mapped areas were reduced, and sources of gravel were identified outside of approved
38 AEAs, then an FMP amendment would be required prior to accessing the gravel for
39 road construction or road maintenance if not located within an ORB, harvest or planned
40 road corridor. The identification of larger AEAs strategically avoids any unnecessary

1 additional workload in preparing and processing any FMP amendment resulting. This
2 may considerably reduce the workload for the company and NDMNRF district staff.

3
4 If the active area of a Forestry Aggregate Pit becomes larger than 3 hectares, the
5 Forestry Aggregate Pit would need to become a permitted Category 9 aggregate pit (as
6 per Operational Standards below).

7 8 9 Operational Standards for Forestry Aggregate Pits

10
11 The extraction of aggregate from Forestry Aggregate Pits for use on forest access roads
12 within the forest management unit will comply with the operational standards in this
13 FMP (from FMPM 2020 Appendix IV: Operational Standards for Forestry Aggregate
14 Pits). The following operational standards apply to the extraction of aggregate
15 resources for Forestry Aggregate Pits:

- 16
17 1. Topsoil and overburden, where present, must be stripped and stored on site.
- 18
19 2. Aggregate material may be removed only within areas where access, harvest, or
20 aggregate extraction has been planned and approved, with no removal occurring
21 within 15 metres of the boundary of any planned area.
- 22
23 3. Aggregate material must not be removed from an area of concern or within 15
24 metres of the boundary of an area of concern, except:
 - 25
26 a. for a cultural heritage landscape or historic Aboriginal value, as defined in the
27 *Forest Management Guide for Cultural Heritage Values*, if,
 - 28 i. FMP-11 of the forest management plan documents conditions on
29 location, construction or use of the Forestry Aggregate Pit, as per the
30 advice of a qualified individual as defined by the *Forest Management*
31 *Guide for Cultural Heritage Values*, and
 - 32 ii. the aggregate material is removed in accordance with such conditions;
33 and
 - 34 b. for all other values, if,
 - 35 i. FMP-11 of the forest management plan documents conditions on
36 location, construction or use of the forestry aggregate pit, and
 - 37 ii. the aggregate material is removed in accordance with such conditions.
- 38
39 4. Notwithstanding standard 3 above, aggregate material must not be removed from
40 an area of concern or within 15 metres of the boundary of an area of concern for the

- 1 following values, as defined in the *Forest Management Guide for Cultural Heritage*
2 *Values*:
- 3 a. archaeology site;
 - 4 b. cemetery; or
 - 5 c. archaeological potential area.
 - 6
 - 7 5. When operating within 15 metres of a proposed roadside ditch, no excavation is
8 to take place below the elevation of the planned depth of the proposed ditch; all
9 excavations must be immediately sloped to no steeper than a 2:1 (horizontal:
10 vertical) angle.
 - 11
 - 12 6. During extraction, no undercutting of the working face is permitted and:
13 a. the working face must be sloped at the angle of repose; or
14 b. the vertical height of the working face must not be more than 1.5 metres above
15 the maximum reach of the equipment.
 - 16
 - 17 7. All trees within 5 metres of the excavation face must be removed. [*note:*
18 *operationally applies to only those trees over 1.5 metres (5 feet) tall*]
 - 19
 - 20 8. The maximum pit area must not exceed 3 ha. When a pit or a portion of a pit is
21 rehabilitated, it is no longer part of the pit.
 - 22
 - 23 9. When the site is inactive, all pit faces must be sloped at the angle of repose.
 - 24
 - 25 10. Within the excavation area, no ponding is allowed and offsite drainage must be
26 designed to prevent sediment from entering any water feature.
 - 27
 - 28 11. NDMNRF may direct that a forestry aggregate pit be rehabilitated where the
29 responsibility for the road and associated forestry aggregate pit is being
30 transferred back to NDMNRF.
 - 31
 - 32 12. Final rehabilitation must include:
33 a. sloping of all pit faces to a minimum of 3:1 (horizontal:vertical);
34 b. re-spreading of any topsoil and overburden that was stripped from the site;
35 and
36 c. mitigative measures, to the satisfaction of NDMNRF, to prevent erosion
37 (e.g. establishment of vegetation).
 - 38
 - 39 13. Existing or proposed Forestry Aggregate Pits within areas of concern, or in the
40 vicinity of features that are addressed by conditions on operations, as described
41 in NDMNRF's forest management guide(s) relating to conserving biodiversity at

1 the stand and site scales, must not be constructed or operated except in
2 circumstances as identified in the conditions on operations in the forest
3 management plan. This includes any restrictions on the construction of new
4 Forestry Aggregate Pits and timing of aggregate extraction, rehabilitation, or
5 other associated operations in existing pits (see Section 4.5.8).

6
7 14. Progressive rehabilitation of the site must be ongoing during the 10-year period,
8 starting from the commencement of the Forestry Aggregate Pit.

9
10 15. If a forestry aggregate pit has not been active for a period of five years and the
11 sustainable forest licensee confirms that future use of the pit is not required, final
12 rehabilitation must be completed in accordance with standard 12 above within 12
13 months of the sustainable forest licensee's confirmation.

14
15 16. Despite standard 15, if NDMNRF agrees that access to the pit that requires
16 rehabilitation is not feasible within the 12-month period specified, NDMNRF and
17 the sustainable forest licensee may agree, in writing, to a longer period.
18

19 **4.5.7.1 Aggregate Extraction Area Information Products**

20
21 Information products associated with aggregate extraction areas identify and portray:

- 22
23 (a) the aggregate extraction area identifier; and
24 (b) the areas of concern.

25
26 Aggregate extraction areas will be included as the following information products within
27 the FMP:

- 28 1. Planned Aggregate Extraction Area layer – MU644_22PAG00
29 2. A series of FMP 1:20,000 operations maps:
30 MU644_2022_FMP_MAP_OPS*****_00

4.5.8 Wood Storage Yards

Wood storage yards are sites that are geographically separated from the harvest location that may be used for slashing, sorting, storage and other wood measurement activities of forest resources prior to the movement to final processing destination(s) (e.g., previous harvest blocks, forestry aggregate pits, existing or new wood storage yards). Wood storage yards do not inhibit public access within the management unit.

There is one wood storage yard included in this FMP:

1. Km 16 of the Cygnet Lake Road

The wood storage yard has previously been licensed under Land Use Permits (LUPs) under the *Public Lands Act* and the public received notice of the activity during the LUP approval process. After revision of the *Public Lands Act* to address exemption of wood storage yard, the wood storage yard will be authorized by approval of the forest management plan. The wood storage yard is currently intended to be used during and after the 2022-2032 FMP plan period.

The wood storage yard is portrayed on the Wood Storage Yard layer of the Operational Planning Inventory (OPI) in accordance with FIM.

Any changes to the type or period of use for a wood storage will require an amendment to the FMP in accordance with FMPM 2020, Part C, Section 2.0.

Operational Standards for Wood Storage Yards

The following operating standards apply to identified wood storage yards (FMPM 2020, Appendix V):

1. Wood shall not be stockpiled on the corner of a road.
2. Wood shall not be stockpiled within the travelled portion of a road corridor.
3. If forestry aggregate pits are to be used for storage, they must be confirmed to be a forestry pit, not one granted to another licence holder or permittee under the Aggregate Resources Act.
4. The wood shall not be stockpiled within 30 metres of a waterbody or watercourse.
5. After use, the wood storage yard must be revegetated to a condition of its former state to the extent reasonably possible;

- 1 6. Debris will be managed as per the slash management section of the FMP and
2 debris (e.g. brush, slash, topsoil) shall not be deposited in ditches or on the
3 shoulders of any road or below the high-water mark of any waterbody or
4 watercourse;
- 5 7. Damage caused by the licence holder's use of existing roads, water crossings or
6 ditches (for access to the wood storage yards) may be subject to repair and/or
7 rehabilitation at the expense of the licence holder;
- 8 8. For identified values and important ecological features within or adjacent to
9 existing or proposed wood storage yards, operational prescriptions and conditions
10 as described in NDMNRF's forest management guide(s) relating to conserving
11 biodiversity at the stand and site scales, must be applied in accordance with the
12 FMP. This includes any restrictions on the construction of new wood storage
13 yards, and the timing, use, revegetation or other associated operations in existing
14 wood storage yards as included in Table FMP-11, Part C: (Conditions on Location,
15 Construction or Use of) Operational Roads and Landings;
- 16 9. Conditions for wood movement and measurement for wood storage yards must be
17 approved in writing by the Ministry's Regional Supervisor, Wood Measurement
18 Section, prior to use. Failure to comply with any conditions set out in this written
19 approval is considered a failure to comply with the conditions set out in the
20 approved FMP. The start date and end date of the use of the wood storage yard
21 must be supplied to the Ministry so that these dates are included in the written
22 approval.

4.5.9 Conditions on Roads, Landings and Aggregate Pits

If an existing road, landing and/or forestry aggregate pit is planned to be used for forest management purposes during the period of the forest management plan, and where the road, landing and/or forestry aggregate pit does not intersect an area of concern, any conditions on the road and/or landing as described in the *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (MNRF, 2010) are documented in this section of the forest management plan. This section also includes the Operational Standards for Forestry Aggregate Pits both within and outside AOCs.

Where a new primary road, branch road, operational road or landing does not intersect an area of concern for a value, any conditions on the primary road, branch road, operational road or landing as described in the *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales* (MNRF, 2010) are documented in this section of the forest management plan.

The extraction of aggregate from forestry aggregate pits for use on forest access roads within the forest management unit will comply with the operational standards in this FMP as outlined in this section.

When a forestry aggregate pit intersects an area of concern, Table FMP-11 identifies if there are conditions on operations. Any operational conditions related to forestry aggregate pits intersecting with area or concerns are stated in Table FMP-11.

The conditions on operations for forestry aggregate pits must take into consideration the *Endangered Species Act, 2007*, including any applicable habitat regulations and relevant policy direction.

All existing forestry aggregate pits will be identified in each Annual Work Schedule.

The following table documents the *Forestry Aggregate Pit Operational Standards* as well as conditions on roads, landings and forestry aggregate pits outside of areas of concern. Reclamation of Landings (Table 50) applies to conditions on new (primary, branch, operational, existing) roads and landings (outside of AOCs).

1 **Table 50 Conditions on Roads, Landings and Aggregate Pits (CORLAPs)**2
3 **Alphabetical List of CORLAPs:** *(CTRL+ENTER on name to go to table section)*4
5 Biofibre Harvest6 Dens of Furbearing Mammals – Enduring Features7 Dens of Furbearing Mammals – Transitory Features8 Large, Landscape Patches – Moose Emphasis Areas (MEAs)9 Loss of Productive Land10 Marten Boxes (Traps)11 Mining Claims and Leases12 Nests – Songbirds13 Nests – Occupied Ground Nests14 Nests – Unoccupied nests/communal roosts in cavities previously used by American Kestrel, Barred Owl, Boreal
15 Owl, Eastern Screech-Owl, Great Horned Owl, Northern Hawk Owl, Northern Saw-Whet Owl or Chimney
16 Swift17 Nests – Unoccupied stick nests built or used by Barred Owl, Broad-Winged Hawk, Common Raven, Cooper’s
18 Hawk, Great Horned Owl, Long-Eared Owl, Merlin, Red-Tailed Hawk or Sharp-Shinned Hawk19 Nests – Inactive Nests of Great Gray Owl, Northern Goshawk or Red-Shouldered Hawk20 Reclamation of Landings21 Red Pine and White Pine Management22 Residual Forest – Mapped23 Residual Forest – Unmapped24 Rich Lowland Hardwood-Dominated Forest (Black Ash)25 Roads Crossing Recreational Portage Routes, Trails used for Working and Accessing Traplines that are not AOCs26 Snapping Turtle Nest Sites in non-natural habitat (i.e., road embankment)27 Wetlands – mapped permanent, non-forest28 Woodland Pools29
30 **General Conditions on Road Planning, Construction and Maintenance; Landings: and Forestry Aggregate**
31 **Pits – Outside AOCs**
32

BIOFIBRE HARVEST

- Stumps and all below ground portions of a tree are not available for utilization as a forest product. Movement or removal associated with construction of roads, landings and skid trails are permitted but will be minimized to that required for efficient operations.
- Organic matter that is not part of a harvested tree (including boles, branches, roots, bark, leaves, needles, debris, soil carbon, etc.) will remain on site. Movement of such material for access purposes is permitted.

DENS OF FURBEARING MAMMALS – ENDURING FEATURES

- New roads/ road construction, landings or forestry aggregate pits/ aggregate extraction areas are not permitted within 20 m of a den entrance.
- Hauling and road maintenance operations are not permitted within 20 m of occupied dens, unless the road predates the den, is required for safety reasons or environmental protection.

DENS OF FURBEARING MAMMALS – TRANSITORY FEATURES

- Occupied dens encountered during operations will not be destroyed (complete or partial damage of the den structure or its contents i.e. adults or young).
- No roads, landings or forestry aggregate pits to be constructed within 3 m of a den known to be occupied.

LARGE, LANDSCAPE PATCHES - MOOSE EMPHASIS AREAS (MEAs)

- No new loop roads are permitted within MEAs.
 - Operational road networks will be constructed on a temporary basis
 - Primary or Branch roads or road networks may have temporary access restrictions applied between periods of operations where road use is not required for forestry purposes.
 - Temporary access restriction may include options such as PLA sign prohibiting certain activities, or where necessary physical obstructions (such as berms, ditches, water crossing removals, slash piles or gates).
- The process for transfer of road responsibility is found in Section 4.5.5.

LOSS OF PRODUCTIVE LAND

- Minimize the amount of area being converted to non-forest (e.g. roads, landings and forestry aggregate pits) to that required for efficient operations (refer to Reclamation of Landings below).
- Generally, strive to keep the area of roads and landings to less than 4% on a per block basis (it is recognized that operational constraints may require more road in some circumstances and that less road may be possible, and therefore desirable in others).
- The loss of productive land may be reduced by:
 - Decommissioning and regeneration of roads to be transferred to the Crown in accordance with Road Use Management Strategies.
 - Decommissioning and regeneration of roads not identified for transfer.
 - Reclamation or rehabilitation of forestry aggregate pits.

MARTEN BOXES (TRAPS)

- When Marten boxes (traps) are encountered, they are not to be disturbed. When encountered;
 - Flag the tree hosting the Marten box with brightly colored ribbon (not orange) (ribbon colour to be different than the colour used to designate harvest block boundaries or road right-of-way)
 - Stub the tree above the box.
 - Do not fall trees toward the marten box.



MINING CLAIMS AND LEASES

- No Forestry Aggregate Pits, unless permitted with authorization of the lease holder.
- When mining claim posts are encountered, they are not to be disturbed.
 - Flag Mining Claim post with brightly colored ribbon (ribbon colour to be different than the colour used to designate harvest block boundaries or road right-of-way)
 - Do not fall trees toward the claim marker/post.
 - Avoid disturbing the soil within 5 m of the mining claim post
 - Stub trees around claim post when encountered.
- Respect mining equipment and operations when encountered;
 - When necessary contact the mining claim operator to identify and hazards of values that may be encountered during operations. This information is held with the NDMNRF.
 - Do not fall trees toward identified values.
 - Equipment should remain a tree length away from the identified values.

NESTS – SONG BIRDS

- Nests of songbirds or other small birds containing eggs or young will not be destroyed (destruction means complete or partial damage of the nest structure or its content i.e. attendant birds, eggs or young).
- Reasonable effort will be made to minimize disturbance (incidental interference with breeding activities such as egg laying, incubation, brooding, or feeding of young) of nests of songbirds or other small birds containing eggs or young encountered during operations. Avoid heavy equipment travel within 20 m of nests containing eggs.
 - Should an occupied nest be found during operations, it will be reported to the site supervisor and operations will relocate, within the block, until the 20m area around the nest can be delineated.
- No restrictions on operations associated with existing roads, landings and forestry aggregate pits.
- New roads, landings and forestry aggregate pits should not be constructed within 20 m of nests containing eggs or young.

NESTS – OCCUPIED GROUND NESTS

- Nests of waterfowl or grouse containing eggs encountered during operations will not be destroyed (destruction means complete or partial damage of the nest structure or its content i.e. attendant birds, eggs or young).
- To minimize disturbance of nests of waterfowl or grouse, containing eggs or young encountered during operations, no road construction or maintenance activities will take place within 10 m of the nest while eggs or young are present
- New roads, landings and forestry aggregate pits should not be constructed within 10 m of nest.

NESTS – UNOCCUPIED NESTS/COMMUNAL ROOSTS IN CAVITIES PREVIOUSLY USED BY AMERICAN KESTREL, BARRED OWL, BOREAL OWL, EASTERN SCREECH- OWL, GREAT HORNED OWL, NORTHERN HAWK OWL, NORTHERN SAW-WHET OWL OR CHIMNEY SWIFT

- New roads, landings, and forestry aggregate pits will not be constructed within 20 m of nests/communal roosts of the barred owl, or great horned owl.
- Avoid constructing new roads, landings and forestry aggregate pits within 20 m of nests/communal roosts (unless there is no other feasible or practical alternative due to inoperable/rough terrain or safety) of the American kestrel, boreal owl, eastern screech- owl, northern hawk owl, or northern saw-whet owl.
- No timing restriction on operations associated with roads, landings and forestry aggregate pits

NESTS – UNOCCUPIED STICK NESTS BUILT OR USED BY BARRED OWL, BROAD-WINGED HAWK, COMMON RAVEN, COOPER’S HAWK, GREAT HORNED OWL, LONG-EARED OWL, MERLIN, RED-TAILED HAWK, OR SHARP-SHINNED HAWK

- New roads, landings, and forestry aggregate pits will not be constructed within 20 m of nests of the barred owl, Cooper’s hawk, common raven, great horned owl, long-eared owl, red-tailed hawk, or unknown large stick nests.
- Avoid constructing new roads, landings and forestry aggregate pits within 20 m of nests (unless there is no other feasible or practical alternative due to excessive terrain or safety) of the broad-winged hawk, merlin, sharp-shinned hawk, or unknown small stick nests.
- No timing restriction on operations associated with roads, landings and forestry aggregate pits.



NESTS - INACTIVE NESTS OF GREAT GRAY OWL, NORTHERN GOSHAWK OR RED-SHOULDERED HAWK

- Avoid constructing new roads, landings and forestry aggregate pits within 20 m of nests (unless there is no other feasible or practical alternative due to excessive terrain or safety).
- No timing restriction on operations associated with roads, landings and forestry aggregate pits.

RECLAMATION OF LANDINGS

- The productive land base will be recovered from landings and these areas will be renewed except where they were not part of the productive land base originally (e.g. rock outcrops).
- Operations will be conducted in a manner to minimize the establishment of landings.
- For any landings that are created the following will occur:
 - Operations will be conducted to recover the productive land base from landings (e.g. return debris to cutover, site preparation, planting/seeding).
 - Redistributing chipper debris across the cut-over resulting in ≤ 20 cm to mineral soil.
 - Landing treatment operations will normally be completed no later than two years following the completion of harvest operations and renewal will be completed no later than three years following the completion of harvest operations.
 - The most applicable SGR will be applied to renew the area, based on the specific site conditions of areas formerly occupied by the landing, and the renewal treatments including regeneration should complement the treatments on the adjacent treated areas.
 - Existing landings (three years old or less) will be treated and regenerated as noted above within three years of the completion of harvest operations.
 - Older existing landings (more than three years old) will be treated and regenerated as noted above using the most applicable SGR unless a different rehabilitation strategy including regeneration standards is documented in this section of the plan. Operations are to be completed no later than the decommissioning timelines outlined in the adjacent roads' use management strategy (RUMS).
- The AWS Compliance Plan will identify the inspection of landing treatments and subsequent regeneration as a compliance priority and will indicate how the inspections will be completed.

Note: It is understood some of the above listed methods are dependent on weather, proximity to heavy equipment, and other factors. Although completion within three years is expected, the ability to complete these procedures within this time frame may not always be feasible. Reasonable efforts will be made to meet the conditions as above.



RED PINE AND WHITE PINE MANAGEMENT

- For PRW forest unit areas:
 - Forestry aggregate pits will be avoided within PRW forest unit areas.
 - Reasonable efforts will be made to avoid constructing new roads within unallocated PRW forest. When necessary, road construction will follow the design principles in 'General Conditions on Road Planning, Construction and Maintenance' to minimize disruption of hydrological function.
 - ROW going through unallocated PRW forest unit areas should be designed to make the least impact possible on the stand by limiting the ROW to less than 20m and laying out the road where it would have the least impact on the stand (distance through the stand).
 - Reasonable efforts will be made to minimize construction of landings within PRW stands.
- For non-PRW forest unit areas:
 - Reasonable efforts will be made to avoid or minimize construction of landings and forestry aggregate pits where identified concentrations of red pine and white pine exist that are outside of PRW stands.
 - ROW going through concentrations of red pine and white pine should be avoided but when required will be designed to make the least impact possible on the stand by limiting the ROW to less than 20m and laying out the road where it would have the least impact on the stand (distance through the stand).

RESIDUAL FOREST - MAPPED

- Before harvest operations begin, the operators will be given a map showing the identified area of influence (AOI) where a residual patch will be required to be placed during operations. Mapped residual represent the preferred location and size of the residual patch.
- Operators may move and adjust the dimensions of the residual patch when locating roads (primary, branch or operational), landings and forestry aggregate pits, and provided that the residual patch still meets the minimum required residual patch size and are within the AOI designated area.

RESIDUAL FOREST - UNMAPPED

- Before harvest operations begin, the operators will be given a map showing the identified area of influence (AOI) where a residual patch will be required to be placed during operations.
- Operators should recognize zones where unmapped residual is required and when locating roads (primary, branch or operational), landings and/or forestry aggregate pits, ensure that the required ½ ha residual patch can still be placed within the AOI. If the ½ ha residual patch cannot be placed in the AOI if the road, landing or forestry aggregate pit is constructed, the road, landing or forestry aggregate pit must be constructed outside the designated AOI area.

RICH LOWLAND HARDWOOD DOMINATED FOREST (Black Ash)

- Landings and forestry aggregate pits are not permitted within the rich lowland hardwood-dominated forest.
- Reasonable efforts will be made to avoid constructing new roads within rich lowland hardwood-dominated forest. When necessary, road construction will follow the design principles in 'General Conditions on Road Planning, Construction and Maintenance' (below) to minimize disruption of hydrological function.

ROADS CROSSING RECREATIONAL PORTAGE ROUTES, TRAILS USED FOR WORKING AND ACCESSING TRAPLINES THAT ARE NOT AOCS

- Ensure that recreational portage routes and trails used for accessing and working traplines are passable and protected following forest management operations.
- Harvest operations will cut trees right to trail or portage trail and will leave the trail or portage trail passable and in a condition as good or better than pre-harvest.
- Operations will avoid skidding wood across trails. Where this is not possible, skid trails will be limited to one crossing every 200m and will cross the trail at right angles when possible.
- Operations will not fell trees across trail or portage nor leave slash on the trail or portage.
- Site preparation operations will not cross trail/portage or operate adjacent to trail or portage that will disturb integrity of it.



SNAPPING TURTLE NEST SITE in non-natural habitat (i.e., road embankment)

- Critical nesting period – date of discovery to September 30th.
- Minimize disturbance of known nests of snapping turtle during breeding activities such as nest construction, egg laying, incubation, or emergence of young. Specifically,
 - Heavy equipment will not travel within 1 m of the identified nest located on road embankments within the critical nesting period.
 - Maintenance operations on existing roads that disturb the roadbed are not permitted within 1 m of the identified nest site during the critical nesting period (except when required for safety reasons or environmental protection). Grading machinery should make an arc around known active nest. The arc should be initiated 5 m before the nest; the top of the arc will be one metre from the nest and return to regular grading activities within 5 m after the nest.
 - Location of nest will be marked by a single pylon on each side to mark the location for oncoming traffic to slow and change their approach.
 - If identified nest is located on the road travel surface reasonable care will be taken to avoid nest by 1m to each side (placement of pylons not required).
- No restrictions on use or normal road maintenance operations if identified nest is located on the road travel surface, or if nest has been predated or if young have left the nest.

WETLANDS – MAPPED PERMANENT NON-FOREST

- Forestry aggregate pits are not permitted within 15m of non-forested wetlands.
- Landings are not permitted within the wetland itself or within adjacent forest that is <15 m from those portions of the wetland dominated by open water or non-woody vegetation.
- Reasonable efforts will be made to avoid construction of new all-weather roads within wetlands or portions of wetlands characterized by open water or non-woody vegetation. When construction of all-weather roads in wetlands is necessary, it will follow appropriate design principals outlined below under ‘General Conditions on Road Planning, Construction and Maintenance; Landings; Forestry Aggregate Pits – Outside AOCs’ to minimize risk of sediment entering the wetland and disruption of hydrological function.
- No contamination of wetlands by foreign materials is permitted. Specifically,



- The use and storage of fuels will be carried out in accordance with the *Liquid Fuels Handling Code*.
- No equipment maintenance (e.g., washing or changing oil) is permitted within 15 m of non-forested wetlands.

WOODLAND POOLS

- New roads are not permitted within 15 m of the high-water mark of pools, unless there is no practical or feasible alternative due to excessive terrain or safety, and appropriate mitigative measures are taken to minimize the risk of sediment entering pools and disruption of hydrological function (see 'General Conditions on Road Planning, Construction and Maintenance; Landings; Forestry Aggregate Pits – Outside AOCs' below).
- Landings and forestry aggregate pits are not permitted within 15 m of the high-water mark of pools.
- No contamination of pools by foreign materials is permitted. Specifically,
 - The use and storage of fuels will be carried out in accordance with the *Liquid Fuels Handling Code*.
 - No equipment maintenance (e.g., washing or changing oil) is permitted within 15 m of the high-water mark of pools.

GENERAL CONDITIONS ON ROAD PLANNING, CONSTRUCTION AND MAINTENANCE; LANDINGS; FORESTRY AGGREGATE PITS – OUTSIDE AOCs

The following conditions apply to existing and new primary, branch and operational roads and landings that are not located within an area of concern.

Road Construction:

- Materials moved during construction, such as grubbed or earth fill material, will not be piled where they block drainage courses.
- Fill material for roads built below the high water level, within the floodplain of a water feature, will be erosion resistant and/or protected from erosion.
- Any exposed mineral soil between the height of land and a water crossing, or within 100m of a water crossing, whichever is less, will be trimmed to a stable angle and be protected from erosion so sediment will not enter the water after construction.



- NDMNRF will ensure that the signs used to identify the use management strategies for roads (e.g., travel restrictions) are maintained.
- The planning, construction and maintenance of primary and branch road corridors and operational road boundaries, and their applicable use management strategies, will consider:
 - The strategic direction associated with other resource plans, policies and directives (e.g., *Crown Land Use Policy Atlas*);
 - The management objectives, and emphasis for specific areas (e.g., management objectives for caribou habitat, direction provided by the *Crown Land Use Policy Atlas*);
 - The potential impact (including benefits) to other natural resource features, land uses, and values (e.g. lakes and streams, cottage sites, boat caches);
 - New Primary and Branch road right-of-way (ROW) may be harvested to a maximum width of 60 metres;
 - New Primary and Branch ROW cleared to 60 m width should be limited and only applied in circumstances where a greater ROW width is needed to extract wood from the ROW or for safety purposes. In other circumstances ROW should be cleared to a maximum of 40 m;
 - Operational road right-of-way (ROW) may be harvested to a maximum width of 40 metres;
 - Operational ROW cleared to 40 m width should be limited and only applied in circumstances where a greater ROW width is needed to extract wood from the ROW or for safety purposes. In other circumstances ROW should be cleared to a maximum of 30 m
- Ensure engineering safety considerations will be incorporated into road planning.
- Monitoring program (Section 4.7.1) for roads and road networks and use appropriate mitigation to prevent or stop erosion in ditches, on steep slopes, etc.
- When all-weather roads must cross wetlands (see conditions on Wetlands section above), provide frequent cross drainage culverts to ensure that surface water is equalized on both sides of the road and impacts to hydrologic flow and wetland function are minimized.
- When road location and landings within the approved corridor are being finalized, avoid recognizable ephemeral streams, springs, seeps, and other areas of groundwater discharge that are connected to lakes, ponds, rivers, or streams and small unmapped wetlands (e.g., woodland pools).
- If recognizable ephemeral streams, springs, seeps, and other areas of groundwater discharge that are connected

to lakes, ponds, rivers, or streams and small unmapped wetlands must be crossed, use construction and maintenance techniques and practices to minimize impacts to hydrologic flow and wetland function. Natural water movements will not be impeded, accelerated, or diverted.

- Identify areas of concentrated surface water flow and prevent blockage through appropriate use of cross drainage culverts. Some of these locations may be best determined the following spring when ponding is evident at unpredicted locations along a new road.
- Where ditches leading downhill from rock-cuts pass over earth material, use techniques to protect the earth/rock interface from erosion.
- Grubbing of low vegetative cover between the height of land (e.g. the high point on a ditch line) and a water crossing, or within 100 m of a water crossing, whichever is less, will be limited to that required to address engineering issues and safety concerns, such as the removal of hazards.
- Where existing roads require right-of-way (ROW) maintenance involving the harvesting of merchantable size timber:
 - Chip pads, landings and skidding areas will be established to facilitate the utilization of the fibre.
 - Chip pads will be limited to a single chip pad that is 30m wide X 45m deep off the road running surface for approximately every 1 km of road on an existing road.
- When explosives and blasting are required ensure that a plan exists to contain the rock or earth material inside the right-of-way.
- When constructing roads during the bird nesting season, and occupied nests are encountered, follow direction in Section 4.2.2.
- When planning primary and branch road corridors, avoid high value wildlife habitats such as ungulate wintering areas where possible.
- Do not place windrows or grubbing materials across known migration paths of wildlife in a manner that could impede their travel.

Road Decommissioning: (SSG 5.1.1.3 pg. 134):

- For each road or road network scheduled to be decommissioned, stabilize slopes and areas of the road with known or identifiable hazards (e.g., slopes susceptible to washouts) to prevent erosion and protect public safety.



- Plan and construct roads to minimize costs associated with decommissioning (e.g., use temporary bridges).
 - Ensure the schedules for road or road network and water crossing decommissioning is coordinated. When decommissioning a road or road system, assess all water crossings on that road or road system.
 - For temporary roads (with “Road Use Strategy 2 – Decommission” as per Table FMP-18 – Roads), as appropriate, may be decommissioned, allowed to deteriorate, or have access restrictions applied to provide the highest level of protection for silviculture treatments applied to areas or to address safety and/or environmental concerns (i.e. a removed water crossing, ditching, or berming).
 - When temporary roads and networks (with RUS-2 Decommission) are not required for forest management activities, roads will receive sufficient monitoring and maintenance as required minimizing risks to public safety and/or environmental damage. Situations may arise where it is determined that a damaged/deteriorating infrastructure poses a safety and/or environmental hazard and continued use must be temporarily prohibited until a permanent solution is implemented. Notification will be provided to the other party as appropriate.
- When forest management activities are completed in an area, environmental liabilities associated with roads or road networks (i.e. water crossings) will be assessed and actions will be taken to reduce or eliminate these liabilities. For primary and branch roads, NDMNRF and the SFL will use a joint working group to evaluate and recommend actions to be implemented when operations have been completed or are near completion. For all roads being decommissioned, inspections to assess required actions, or to confirm agreement on satisfactory completion of actions, may be conducted jointly with SFL and NDMNRF staff. For any operational roads originating from a Local Roads Board road, an MTO representative will also be involved.

4.6 Expenditures

This section of the plan identifies projected expenditures required for renewal and maintenance operations for the 10-year period of the plan, 2022-2032.

The planned expenditures by activity and funding source is summarized for the 10-year period in Table FMP-19. The following text provides the rationale and methodology for calculation of expenditures associated with the implementation of renewal and tending operations.

The revenue generated for the Forest Renewal Trust Fund (FRTF) is projected to be approx. \$13.8 million for the 10-year period. The renewal fund contribution rate per cubic metre of harvested wood of \$8.50 for red pine and white pine, \$3.00 for cedar, \$6.00 for other conifer, \$1.50 for lowland hardwood, and \$1.05 for upland hardwoods was used. FRTF contributions will be adequate to maintain the fund above the minimum balance for the account while funding the projected silvicultural program. In the SFMM Model scenarios including LTMD, the same contribution rate per cubic metre harvested by species was used. Contributions to the fund at the maximum contribution level may not be required during for the duration of the plan period if adequate funds are available in the Forest Renewal Trust Fund to complete the scheduled renewal activities.

The forecast expenditures required to complete the forecast silvicultural activities and regeneration assessments for the 10-year period of this plan (as reported in Tables FMP-17 and FMP-20) are \$13.4 million. Natural regeneration of KEN51 is not factored into these expenditures (no regeneration activities, and no access for surveys). Road construction and maintenance costs are not included in the forecast expenditure total.

Considerations of general silvicultural expenditures included:

- Projected cost of mechanical site preparation,
- Projected costs of tree seed collection and processing, and the quantity of seed required for aerial seeding and sowing of tree seedlings for planting,
- Projected tree planting costs including the cost of tree seedling production (includes planting of site with and without previous mechanical site preparation),
- Average projected tree planting or aerial seeding densities,
- Projected cost of tending by herbicide application, including the cost of the herbicide,
- Projected cost of renewal support,
- Projected cost of regeneration and free-to-grow (establishment) surveys, and
- Administrative costs for silviculture.



1
2 The Analysis Package (Supplementary Documentation B) presents the clearcut forest
3 renewal cost assumptions in Section 6.2.3.3. The average estimated renewal cost per
4 hectare, by forest unit harvested and the silvicultural intensity of treatment applied to
5 achieve the future forest unit is documented.

6
7 The company evaluated the silvicultural requirements for areas treated prior to 2022,
8 based on existing information and silvicultural ground rule prescriptions and
9 regeneration standards. This evaluation was made to determine outstanding treatments
10 (not yet completed) and their associated costs. For areas forecast to be harvested in
11 the 2012-2022 FMP, preliminary silvicultural ground rules were assigned to each area.
12 The regeneration treatments and expenditures were forecast based on average annual
13 harvest by forest unit and an estimate of area to be treated with specific activities during
14 the 10-year period. The forecast revenues generated for the Forest Renewal Trust
15 Fund (FRTF) will be projected annually to ensure the balance is maintained above the
16 minimum balance for the account while funding the projected silvicultural program.
17 Renewal rates may be changed annually if the costs of renewal increase or the fund is
18 significantly above the minimum balance with adequate funds to treat all outstanding
19 areas.

20
21 Expenditures funded through the Forestry Futures Trust Fund (FFTF) will include
22 various eligible projects or expenditures approved on an annual basis during
23 implementation of the plan, and a portion of the costs associated with the maintenance
24 of the Forest Resources Inventory (FRI) for the management unit (Forest Trust Forest
25 Resources Inventory, FTFR).

4.7 *Monitoring and Assessment*

This section of the plan text documents the monitoring and assessment program for forest operations inspections, exceptions monitoring, assessment of regeneration success, and the monitoring of roads and water crossings.

Forest management operations are regularly monitored to ensure compliance with the management plan, with particular emphasis on prescriptions for operations including: area of concern prescriptions, any restrictions on operations, water crossings and adherence to harvest boundary lines. Monitoring is also conducted to evaluate silvicultural activities, renewal success and changes in forest cover. The NDMNRF conducts surveys of forest values to support forest management planning. No monitoring of exceptions to silvicultural guides and other guidelines is planned as no exceptions are planned at this time.

All Forest Resource Licence (FRL) holders and contractors are required to report all new values or changes to values encountered during operations, as per the direction in the 2020 FMPM (Section D 3.5.3). The general public will be encouraged to report new values in the Kenora Forest, and will be provided opportunities to review the annual work schedules at any time of the year.

This section also outlines the NDMNRF district program for auditing forest operations and conducting forest operations inspections. Compliance performance will be communicated to the Local Citizens' Committee for their review as outlined in Section 4.7.1.10.

4.7.1 **Forest Operations Inspections**

This section includes Miitigoog's 10-year compliance strategy that was developed in accordance with the requirements of the *Forest Compliance Handbook* (MNRF, 2014), as directed by the FMPM 2020 and the Forest Information Manual (MNRF, 2020). The compliance handbook describes the forest operations inspection process, the requirement for the sustainable forest licensee to produce inspection reports, and the processes for managing operational issues that may be identified through compliance inspections. This section describes the methods, intensity and frequency of forest operations inspections, particular circumstances for which the sustainable forest licensee will conduct forest operations inspections (e.g., forest operations in, and adjacent to, areas of concern), and the submission of inspection reports to NDMNRF.

4.7.1.1 Compliance Goal

The goal for Ontario's forest is "to ensure the long-term health of our forest ecosystems for the benefit of the local and global environments, while enabling present and future generations to meet their material and social needs." (Source: *Policy Framework for Ontario Forests*, MNRF).

To help meet this goal, the NDMNRF has prepared a Forest Compliance Strategy, which has as its goal: "To encourage and ensure adherence to rules and requirements which contribute to the sustainable management of Ontario's Forest." (Source: *A Forest Compliance Strategy*, 2007, MNRF).

The goal of Miitigoog is to continuously improve all aspects of forest operations by evaluating past compliance issues and using appropriate monitoring and reporting techniques to meet or exceed all applicable provincial standards and guidelines:

4.7.1.2 Background

A condition of the SFL and a requirement of both the *Forest Management Planning Manual* and the *Forest Information Manual* is that the SFL holder prepare a Forest Compliance Plan for planning, monitoring, reporting, and education/prevention on its forest management operations to ensure compliance with all applicable legislation, regulation, the forest management plan, and with NDMNRF manuals and guidelines affecting those operations.

The purpose of this 10-year forest compliance strategy is to develop a simple, efficient and effective means of ensuring forest operations are conducted in compliance with the Crown Forest Sustainability Act and associated applicable manuals, regulations and guidelines affecting operations. It has been written according to direction from the *Forest Compliance Handbook* (MNRF, 2014), as directed by the Forest Management Planning Manual (MNRF, 2020) and Forest Information Manual (MNRF, 2020).

Company employees and overlapping licensees are responsible for compliance to all guidelines and the management plan and the AWS. Provisions will be made in Overlapping Forest Resource Licence Agreements for Overlapping Licensees to follow the Compliance Plan measures outlined in this section. If the Overlapping Licensee fails to abide by the requirements of the Compliance Plan, they will be ordered by Miitigoog to stop activities, and the NDMNRF will be notified.

1 The NDMNRF district program for auditing forest operations and conducting forest
2 operations inspections includes receiving and reviewing Forest Operations Inspection
3 Reports, conducting spots checks on in-progress operations and completed reports,
4 and following up on non-compliance issues identified by Miitigoog, NDMNRF or the
5 public. NDMNRF will continue to develop an annual compliance plan at the district level
6 and focus on priority areas identified in that plan as appropriate.

7
8 Compliance performance on the forest will be communicated to the local citizens
9 committee for their review during monthly meetings if there are specific issues, and
10 annually in the fall associated with the review of the Annual Report.

11
12 There are a variety of methods and procedures that can be employed as part of the
13 overall monitoring program, including direct methods, such as field inspections and
14 observations, as well as indirect methods such as the use of aerial photography. Both
15 formal and informal procedures will contribute to an effective monitoring program. The
16 Compliance Plan for the Kenora Forest provides specific details of monitoring and
17 assessment to be conducted during the 2022-2032 period.

18
19 Miitigoog LP is the Kenora SFL holder and is solely responsible for all obligations and
20 responsibilities under the SFL agreement. As of April 1, 2011, all operational
21 management responsibilities are conducted through a service agreement with Miisun
22 Integrated Resource Management Inc. (Miisun).

23
24 The compliance strategy outlined within the FMP will assist in improving operating
25 practices. It will guide and direct all company, overlapping licenses, shareholders, and
26 contracted activities. In support of this Miitigoog will be responsible for:

- 27
28
- Forest management activities (planning, renewal, roads, etc.) on the Kenora
29 Forest
 - Implementation of the compliance plan including education, monitoring, and
30 supervision of operations, FOIP maintenance and updates, and;
 - Reporting of the Kenora Forest compliance program
- 31
32

33
34 Through the annual compliance plan, compliance priorities are selected to work on by
35 Miisun, on behalf of Miitigoog, and NDMNRF within that current AWS year. Changes to
36 provincial legislations, policies and procedures affecting forest operations are discussed
37 regularly. Additionally, any changes in protocol based on root cause of infractions are
38 discussed between NDMNRF and Miisun, and then are implemented to help improve
39 compliance actions.

4.7.1.3 Objectives, Strategies and Actions

The following are objectives for Miiitigoog LP's compliance program on the Kenora Forest. Strategies and action plans will be employed to achieve each objective.

Objective #1 - Resource Protection

To ensure that the sustainability of the forest resource is maintained, and all known forest values are protected during forest management activities through area of concern planning and following standard operating procedures.

To encourage the identification of new values, and conduct any necessary Forest Management Plan amendments, to continuously improve resource protection.

To assist in the protecting the forest against the threat of fire, insects and disease.

Strategy:

To apply prescriptions designed to protect and enhance known or unmapped forest values.

Actions:

- Conduct a risk analysis of forest operations by assessing environmental and operational characteristics of sites and operational systems for those sites to guide the assignment of compliance monitoring resources and establish a level of non-compliance risk
- Forest Management Plans will be prepared according to the NDMNRFs Forest Management Planning Manual (FMPM)
- Full Area of Concern (AOC) planning will be completed for all known values during FMP preparation
- The nature and location of all known values and the prescriptions for their protection will be communicated to all forest operators
- All forest operators will be watchful for new values and will immediately report any new values discovered to the company and the NDMNRF for evaluation.
- AOC planning will be done in a timely manner for any new values applied, reported or amended to the FMP.
- The public will be encouraged to report values information at any time
- The Fire Prevention and Preparedness Plan contained within the Forest Management Plan (FMP Section 4.8) will be fully implemented. Representatives and contact information for industry and government will be updated annually in the Annual Work Schedule (AWS) and provided to the NDMNRF Fire Management.

- 1 • The Company will co-operate fully with NDMNRF in fire prevention, mitigation
2 and suppression activities through annual meetings, daily conversation during
3 elevated fire indices and joint field inspections, as needed.
- 4 • Forest Operations Prescriptions (FOP) will be implemented to meet the intent of
5 FIM.
- 6 • Miisun will take note of and report insect or disease outbreaks on the forest
- 7 • Silvicultural strategies will be developed and implemented to reduce the
8 likelihood of insect and disease occurrence.
- 9 • Internal and external EMS audits are conducted annually to ensure conformance
10 to Miitigoog's environmental management system, sustainable forest
11 management requirements, and legal and other requirements.

13 **Objective #2 - Staff Educational Training, Knowledge, Skills, and Communication**

14 To ensure that all staff, contractors, overlapping licensees and forest workers are
15 trained and educated regarding work practices and techniques that maximize
16 compliance with the FMP through the applicable legislation, regulations, guidelines and
17 Miitigoog's standard operating procedures prior to work commencement.

18 **Strategy:**

19 To ensure that all staff and contractors, overlapping licensees and forest workers have
20 access to training or updates as changes to legislation, regulations, guidelines or
21 Miitigoog's standard operating procedures occur.

22 **Actions:**

- 23 • Miisun staff responsible for the preparation of FMPs will attend the NDMNRF
24 training sessions
- 25 • Miisun staff, contractors, and overlapping licensees will attend Environmental
26 Management System (EMS) training and refresher awareness, at which time
27 changes are identified and communicated. If changes arise that are immediately
28 pertinent, bulletins are distributed to staff and contractor operations at that time.
- 29 • Miisun staff will attend refresher Forest Management Plan training when offered.
- 30 • Miisun staff will actively promote environmental awareness and expect
31 compliance to all standard operating procedures throughout the operations.
32 These operating standards will meet or exceed all applicable legislation,
33 regulations and guidelines.
- 34 • Operating standards and compliance are reviewed every 3 years with contractors
35 and contractor employees, or as needed.
- 36 • Miisun staff will coach contractors and overlapping licensees in the interpretation
37 and application of operating standards.
- 38 • Miisun staff will receive forest fire suppression training and re-certification as per
39
- 40

1 the OFIA and NDMNRF agreement (SP-102 industry standard).

- 2 • Environmental incident hazard reports outlining non-conformance and non-
- 3 compliance issues are reviewed by Miisun staff and used to identify key
- 4 learning's for future annual training.
- 5 • Copies of the annual compliance plan are distributed to staff, contractors and
- 6 overlapping licensees.
- 7 • Miisun employs a certified Forest Operations Compliance Inspector.

9 **Objective #3 - Maximizing Efficiency of Compliance Activities**

10 To conduct compliance activities in a manner that makes the most efficient use of
11 resources, staff and time, and to concentrate on identified opportunities for
12 improvement.

14 **Strategy:**

15 To ensure that forest operations receive the proper compliance monitoring intensity as
16 determined through a risk analysis developed by the company and the NDMNRF.

18 **Actions:**

- 19 • Conduct a risk analysis of forest operations and apply risk management
- 20 decisions to ensure the best allocation of contractor supervisors and staff.
- 21 • Day to day monitoring of activities is the responsibility of the front line supervisor
- 22 who is directing activities on the work site (in the case of most operations, the
- 23 front line supervisor may be the contractor or overlapping licensee himself)
- 24 • Using company and contractor supervisors, monitoring compliance is performed
- 25 as part of their daily routine.
- 26 • Annual external forest certification audits are completed by third party auditors on
- 27 Miitigoog's SFL. Miitigoog is evaluated on how they meet the certification
- 28 standards with regards to legal compliance criteria through field visits and
- 29 documentation review. Miitigoog is committed to developing and implementing
- 30 action plans to correct any identified findings in a timely manner.
- 31 • Internal EMS audits are conducted by Miisun on behalf of Miitigoog. The
- 32 company audits each forest operation once per year to talk with operators,
- 33 supervisors and to ensure compliance is conducted as per the requirements.
- 34 When non-compliances are noted, corrective actions are assigned.
- 35 • The annual compliance plan will be based on an analysis of the previous year's
- 36 compliance reports to identify areas which need to be concentrated on for
- 37 improvement. Joint inspections by company and NDMNRF staff are encouraged
- 38 to ensure a common understanding of standards, effective communication and
- 39 efficient use of time and transportation
- 40 • Compliance monitoring activities will be reported to NDMNRF using the FOIP
- 41 program.

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Objective #4 - Increasing Compliance with Legislation, Plans and Policies

To conduct and measure all forest management activities in a manner that meets or exceeds the requirements of Miitigoog’s Environmental Policies and Standard Operating Procedures. Internal policies developed as part of the EMS meets or exceeds existing NDMNRF guidelines.

Strategy:

To incorporate all monitoring systems currently being used to increase compliance in operations.

Actions:

- Conduct a risk analysis that recognizes the contribution of other compliance monitoring systems required by Miitigoog such as the environmental and forest certification systems, existing internal Standard Operating Procedures, and contractor experience as assets to maintain or improve compliance.
- Miitigoog will maintain a set of Environmental Policies and Standard Operating Procedures that meets or exceeds all applicable legislation, regulations and guidelines
- Miitigoog's Environmental Policies and Standard Operating Procedures are updated regularly to comply with new legislation, regulations and guidelines.
- Miitigoog operational contracts contain clauses requiring adherence to operating standards and the compliance plan.
- Overlapping Forest Resource Licence Agreements contain clauses requiring adherence to Miitigoog's operating standards and the compliance plan.
- AOC prescription information is shown on all FMP and AWS maps. Field staff is provided a list of all AOC codes with descriptions. Pre-work documentation provided to the contractors lists detailed AOC information on a block-by-block basis.
- Conditions on Regular Operations (CROs) and Conditions on Roads, Landings and Aggregate Pits (CORLAPs) are reviewed with field staff during environmental and forest certification training, and FMP and BMP training. Pre-work documentation provides review of CROs, CORLAPs.
- Copies of current AWS maps are available to and used by all forest operations.
- Miisun staff will conduct a Pre-work review with contractors prior to commencing work.
- When it is available, the most recent FRI and SAP photographs that is available will be used by staff doing block layouts in addition to GPS use.
- Compliance inspectors complete Compliance Reports, following the requirements



1 of the Forest Compliance Handbook FOR 07.03.04 and FOR 07.03.05 and the
2 Forest Information Manual.

- 3 • Annual EMS audits are conducted on every operation to measure adherence to
4 Miitigoog's operating standards and third party certification.

6 **Objective #5 - Continuous Improvement**

7 To track progress of compliance and take actions to continually improve upon past
8 performance.

10 **Strategy:**

11 To provide guidance to ensure compliance with future forest operations through
12 analyzing past performance.

14 **Actions:**

- 15 • Corrective action will be initiated to remedy any issues and non-compliance
16 identified during inspections and Miisun's staff, on behalf of Miitigoog, will follow
17 up to see that it is completed.
- 18 • An investigation will be conducted of all issues and non-compliance/non-
19 conformance incidents to determine causes and prescribe effective preventive
20 measures as described in Miitigoog's monitoring procedure, which includes the
21 development of action items.
- 22 • Each contractor's performance relative to the operating standards is reviewed
23 with them regularly.
- 24 • Compliance performance will be summarised and evaluated on an on-going
25 basis and action taken to address problems and identify issues. Compliance
26 priorities as compiled annually within the AWS will be reviewed with each
27 contractor or OFRL to ensure full understanding of remedial actions/ SOP's
28 developed to prevent future occurrences.
- 29 • Miisun, on the behalf of Miitigoog, is committed to provide notifications of the
30 status of operations to NDMNRF within the required timelines.
- 31 • Completed compliance reports are entered into FOIP.

33 **4.7.1.4 Risk Analysis and Management**

34
35 With all forestry operations there are inherent risks that could cause environmental,
36 social or operational concerns. The focus for forest compliance planning is achieving
37 the best risk management decision in the planning and allocation of forest compliance
38 monitoring resources given all the other mitigating measures that may have been put in
39 place so that an appropriate balance is struck among:

- 1
- 2 • minimizing of the likelihood of non-compliant occurrences;
- 3 • minimizing the probability of the failure of monitoring systems to detect a non-
- 4 compliance; and
- 5 • minimizing the amount of or adequately mitigating any loss or damage resulting
- 6 from a non-compliance.
- 7

8 The Miitigoog internal Environmental Management System (EMS), which includes
9 annual Sustainable Forestry Initiative (SFI) awareness training, multiple SFI audits
10 annually and EMS Standard Operating Procedures (SOPs), compliments the
11 compliance reporting requirements of the *Forest Compliance Handbook* (MNRF, 2014).

12
13 A risk analysis has been undertaken on forest operations to determine the level of
14 operational and environmental risk. To maintain consistency in assessing risk, a score
15 is assigned based on the likelihood of an impact to a value that is to be protected and
16 the capability of the people applying the protection. Each operation is tallied for a total
17 risk score, which ranks the operation's risk from low to high. High rankings have a
18 greater chance of having a compliance issue, therefore requiring a higher level of
19 monitoring, while low rankings will require less monitoring. It is believed that this
20 method of ranking impacts meets the requirements of the NDMNRF Compliance
21 Handbook on risk analysis.

22 23 Harvesting Risk

24 All forest operations are evaluated and ranked as to whether they pose a significant
25 impact on the environment or to society (Risk Assessment Impact) (RAI). Where AOC
26 prescriptions, CROs, Conditions on Roads, Landings and Aggregate Pits (CORLAP)
27 and operating procedures within the FMP are based on the sensitivity of the value to
28 forestry activities, compliance risk is based on the likelihood an impact will occur.

29
30 To maintain consistency in assessing risk, a score is assigned based on likelihood of an
31 impact on a value to be protected (i.e. historical compliance, complexity of prescriptions,
32 etc.) and the capability of the people applying the protection (i.e. knowledge, personal
33 compliance history). It is believed that this method of ranking impacts meets the
34 requirements of the NDMNRF Compliance Handbook on risk analysis.

35
36 Risk based on Likelihood of Impact is ranked for the following AOC prescriptions:

37
38 **LOW RISK =** A01, C01 M01, M03, M04, M07, N02, N04, N05, N06, N11,
39 HL1, NG1, PL1, RR1, W01, W02, W03
40



MODERATE RISK = FN1, N01, N03, N10, N13, PP1

HIGH RISK = A02, I01, I02, I03, I04, I05, I06, I07, D01, D02, D03, D04, D05, M02, M05, M06, N07, N08, N09, N12, N14, N15, N16, N17, N18, RP1, RP2, RP3, RP4, RP5, T01, T02, T03, T04, Tar, Tat, Tcs, Tmb, Tnr, Tpt, Trd, Tst, Tt1, Tt2, Tt3, Tt4, W04, W05, W06, W07, W08

Risk based on **Capability** is ranked by the following factors:

LOW RISK = Loggers trained to EMS/FMP procedures with no more than three (≤3) operational issues and zero (0) non-compliances in the past 3 fiscal years

MODERATE RISK = Loggers trained to EMS/FMP procedures but have had more than three (>3) operational issues and zero (0) non-compliances in the past 3 fiscal years

HIGH RISK = Loggers newly trained to EMS/FMP procedures or have not logged on the Kenora Forest in the past 3 years or have had at least one (≥1) non-compliance inspection in the past 3 fiscal years.

NOTE: Loggers refer to operators on ground, not the Licensee or Contractor Approved to Commence Harvesting Operations.

Table 51 Risk Ranking Table

Capability Rating	Likelihood Rating		
	Low	Moderate	High
Low	LOW RISK	LOW RISK	HIGH RISK
Moderate	LOW RISK	HIGH RISK	HIGH RISK
High	HIGH RISK	HIGH RISK	HIGH RISK

From the table above, when an operation falls within “LOW RISK”, it is considered a low risk activity and a notice of completion of the harvest will be submitted to the NDMNRF. Harvest blocks within “HIGH RISK” are deemed to be a higher risk activity and will require FOIP reporting.

Forest Renewal/Maintenance Risk

Tree planting, aerial seeding, pre-commercial thinning and mechanical site preparation are deemed to be low risk activities. A notice of completion of the renewal activity will be submitted to the NDMNRF.



1
2 Herbicide application is deemed to be a high risk activity. One FOIP inspection report
3 will be completed on these operations, annually.

4
5 Road Construction Risk
6 All primary and branch road construction will have one FOIP inspection report submitted
7 when the road has been completed. Where road construction may take multiple years,
8 the road will be left in a stable state after each stage of construction.

9
10 Road Maintenance Risk
11 Ditching or right-of-way cleaning within an AOC or 100m (or height of land) of a water
12 crossing will be inspected. A notice of completion of these road maintenance activities
13 will be submitted to NDMNRF.

14
15 Road maintenance on other roads (grading, gravelling, dust-control) activities are low
16 risk and do not require notice to NDMNRF.

17
18 Herbicide application on right-of-way is deemed to be a high risk activity. One FOIP
19 inspection report will be completed on these operations, annually.

20
21 Water Crossing Risk
22 A FOIP inspection report will be completed for all bridge installation or removals, all
23 culvert installations crossing moderate or high potential sensitivity water (as described
24 in the Stand and Site Guide section 4.1). Water crossing installations or removals on
25 low potential sensitivity watersheds (as described in the Stand and Site Guide section
26 4.1) will only require a notice of completion submitted to NDMNRF. One FOIP report
27 will be submitted annually for all winter crossing removals. Details for each water
28 crossing are to be itemized within the FOIP report. Other water crossing activities will
29 provide a notice of completion submitted to NDMNRF.

30
31 Mitigating Risk through Standard Operating Procedures
32
33 When impacts are determined to be 'significant', development of a Standard Operating
34 Procedures (SOP) will be considered. SOPs are work instructions to be followed by
35 staff, contract employees and overlapping licensees to prevent or mitigate the identified
36 impacts. The SOPs include relevant provincial legislation and guidelines for each type
37 of forest operation to ensure compliance is met in all activities. It is a requirement within
38 the Emergency Management System (EMS) that prior to new contractors or staff
39 beginning work on the license that they have reviewed relevant SOPs with their

1 supervisors. This knowledge includes company EMS/SOP emergency spill and fire
2 reporting procedures and protocols.

3
4 Miitigoog strives to ensure this system of control is successful. It is mandatory that
5 contractors receive training on the SOPs and EMS system. Prior to an activity starting
6 on the license a pre-work document is given to contractors to review with their staff.
7 The pre-work includes an approved AWS block map which highlights AOCs, potential
8 sensitive sites and block boundaries. There are also work instructions included such as
9 common compliance information on retention trees, descriptions of AOCs found inside
10 the block, any timing restrictions or special operating conditions. Contract supervisors
11 and operators have their knowledge of the SOPs tested during annual external forest
12 certification and internal EMS audits. As well, further controls and mitigation measures
13 to ensure compliance success are implemented as described in the actions pertaining
14 to the strategies stated above.

15 16 **4.7.1.5 Roles and Responsibilities**

17
18 There are a number of specific functions to the preparation and implementation of the
19 Compliance Plan. All company staff, contractors, overlapping licensees and forest
20 workers have responsibility for compliance and play a role in ensuring activities are in
21 compliance. Table 52 lists a few specific responsibilities associated with compliance
22 and identification of who has responsibility for them.

23
24 **Table 52 Summary of Compliance Responsibilities**

25

Roles	Position Responsible
Forest Management Program	<ul style="list-style-type: none"> • Management Forester
Identification of Certified Inspectors	<ul style="list-style-type: none"> • General Manager
Forest Operations	<ul style="list-style-type: none"> • Forestry Technician • General Manager • Management Forester • Operations Forester
Compliance Inspections	<ul style="list-style-type: none"> • Forestry Technician • Operations Forester • Management Forester
Review and Approval of FOIP	<ul style="list-style-type: none"> • General Manager
Company Representation	<ul style="list-style-type: none"> • General Manager • Management Forester • Miitigoog President

Roles	Position Responsible
Preventative, Mitigative Actions	<ul style="list-style-type: none"> • Miitigoog Vice President • Forestry Technician • General Manager • Management Forester • Operations Forester • Overlapping Licensees & Employees and sub-contractors • Contractors & Employees and sub-contractors
Prevention, Monitoring, Reporting	<ul style="list-style-type: none"> • Forestry Technician • General Manager • Management Forester • Operations Forester • Overlapping Licensees & Employees and sub-contractors • Contractors & Employees and sub-contractors
Training	<ul style="list-style-type: none"> • Forestry Technician • General Manager • Management Forester • Operations Forester

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Contractors & Overlapping Forest Resource Licensees:

Miitigoog, as the S.F.L. holder has overall accountability for the compliance program on the forest. All overlapping licensees and contractors are responsible for prevention, monitoring, inspecting and reporting on the area of operations. The harvest and silviculture contractors along with the Overlapping Forest Resource Licence Agreement holders require a contract for work and the overlapping licensee to adhere to Miitigoog’s compliance plan, government legislation and regulations, the FMP, AWS and Miitigoog’s standard operating procedures.

Overlapping licensees are responsible for ensuring compliance on all operations over which they have control, and that these operations adhere to legislation and any special conditions addressed in the FMP (e.g.: AOC prescriptions, CROs). Although licensees are responsible for their own compliance, Miisun, on behalf of Miitigoog, staff will continue to monitor their compliance and work with them and NDMNRF when necessary.



1 When compliance issues arise, the OFRL will be required to contact Miisun
2 immediately, and Miisun will notify the MNRF. Miisun and the OFRL will work with
3 NDMNRF directly to correct or mitigate compliance issues. In the event of a non-
4 compliance penalty situation, caused by the OFRL, the licensee will be responsible for
5 remedial actions and the costs of remediation and the penalty.

6
7 Miisun will complete inspections and reporting required for all OFRLs on the Kenora
8 Forest.

9
10 **NDMNRF's Role:**

11 NDMNRF contributes to the compliance system in a number of ways. They review and
12 approve strategic compliance plans and annual compliance schedules. New legislation,
13 regulations and guidelines are communicated to the company by NDMNRF. NDMNRF
14 may provide coaching and training assistance to the company. By joining in field
15 inspections with Miisun staff, NDMNRF ensures consistent understanding, interpretation
16 and application of regulations and guidelines.

17
18 NDMNRF will review the company reports for accuracy and completeness as per the
19 *Forest Information Manual*, compliance plan, and compliance handbook. If the
20 company reports do not meet the requirements, the reports will be returned to the
21 company for corrections.

22
23 NDMNRF is required to verify all company operational issues. Once the NDMNRF is
24 made aware of a situation, a site inspection will occur (where applicable) to verify and
25 collect information on the circumstances of the issue. Based on information collected,
26 and communications with the company, a resolution will be determined. NDMNRF will
27 add this "Verification data" to the company report using the FOIP program.

28
29 The NDMNRF will report all operational issues within 5 working days of discovery to the
30 company. A FOIP report will be submitted within 10 working days of detection.

31
32 NDMNRF will assist with monitoring the compliance of small commercial and personal
33 use Forest Resource Licence holders, for products such as fence posts and building
34 logs, "personal use" and commercial fuel wood, the activities of utility companies such
35 as Trans Canada Pipelines and Ontario Hydro, and harvest by mining, prospecting and
36 other non-forest industry companies.

37
38 NDMNRF and Miisun will conduct joint quarterly meetings to ensure compliance
39 reporting and required actions are being addressed in a timely manner. At this time,

1 joint field visits, shared training, current and upcoming issues are discussed along with
2 the preparation of Actions Plans to address these items.

4 4.7.1.6 Notification of Status

5
6 The Forest Compliance Handbook, section FOR 07 03 05 outlines the specific
7 requirements regarding notification of operational status, as outlined below in Table 53.

8
9 **Table 53 Inspection Reporting Times**

Activity Status	NDMNRF Reporting Requirement	Timeline	Responsibility
Start Up Notification			
New harvest, road construction/maintenance , water crossing installation, renewal and maintenance silviculture operations	Notify the NDMNRF of the commencement of new operations through email	Within 5 working days of operations start up	Miitigoog
Suspended Operations Notification			
Harvest, road construction/maintenance , renewal and maintenance silviculture operations	Notify NDMNRF by email of suspended operation - Document is to provide details of suspension, wood remaining, and intended date of return. - Operations may not be suspended for more than the balance of the period of the current AWS and one further AWS period.	Within 20 working days prior to suspension of operations	Miitigoog
Water crossings	The installation or repair of water crossing cannot be suspended. Once the activity has begun, it must be completed to a stable state.		
Renewal and maintenance activities on suspended harvest blocks	Notify NDMNRF by email identifying which harvest areas they want to have released for renewal activities to occur.	No less than 10 working days prior to start-up.	Miitigoog
Completion of Operations Notification			
Harvest, road construction/maintenance , water crossing, renewal and maintenance silviculture operations	For operations considered LOW RISK^a , notify NDMNRF by email. For operations considered HIGH RISK^b , submit FOIP report.	Within 20 working days of completion of operations.	Miitigoog
Discovery of an Operational Issue.			



Activity Status	NDMNRF Reporting Requirement	Timeline	Responsibility
Issue results in environmental loss or damage	Notify verbally and in writing	Verbal within 24 hours and written within 5 working days.	Miitigoog or NDMNRF
Other issues	Notify by email	Within 5 working days	Miitigoog or NDMNRF
	Submit FOIP report	Within 10 working days	Miitigoog or NDMNRF

1 ^a LOW RISK = harvest areas as Risk Rating Table above, tree planting, aerial seeding, mechanical site
 2 preparation, pre-commercial thinning, road grading, gravelling, dust suppressant, and water crossing
 3 <=1200mm.

4 ^b HIGH RISK = harvest areas as Risk Rating Table above, herbicide applications, road construction
 5 within 100m of water, water crossings of MPS/HPS, bridge install/removal, and winter water crossings.
 6

7 **Compliance Reporting to NDMNRF**

8
 9 Miisun, on behalf of Miitigoog, will report the results of its compliance monitoring
 10 activities to the NDMNRF on a regular basis through day to day communications and
 11 using the NDMNRF FOIP reporting system.

12
 13 NDMNRFs web-based Forest Operations Information Program (FOIP) will be used to
 14 document inspections and operational issues associated with operations, and to ensure
 15 that appropriate actions have been carried out when operational issues are identified.

16
 17 When an operation has been assessed as low risk and completed operations are
 18 without operational issues, a FOIP Completed compliance report does not need to be
 19 submitted. Instead, a written notice of completion will be sent to the district NDMNRF,
 20 providing the location, following the same timelines as outlined in the above table. The
 21 notification table will be used as the written notice between the company and the
 22 NDMNRF.

23
 24 Where the operations spans more than one AWS period and a Completed Notice was
 25 not filed within two years of the Start-Up notice or the date of approval of the AWS, a
 26 Completed compliance inspection will be done and submitted in FOIP.

27
 28 Completed notifications are not applicable to an Access operation CRA that contains
 29 multiple water crossings, and therefore requires a Completed compliance inspection to
 30 be submitted in FOIP within 10 days of completion of the final water crossing.
 31



1 Reporting of Operational Issues

2
3 All operational issues are to be reported immediately by forest workers to their
4 supervisor. If an operational issue can easily be corrected it must be done so
5 immediately. On-going operational issues or non-correctable operational issues are to
6 be verbally reported immediately by the supervisor to Miisun, who in turn will notify
7 NDMNRF. Where an investigation is deemed necessary, Miisun staff will investigate as
8 per the monitoring procedure.

9
10 All identified instances resulting in environmental loss or damage will be reported to
11 NDMNRF verbally (within 24 hours) and must be followed up with a written notification
12 within 5 working days. The Inspector is to submit all other inspection reports that contain
13 operational issues to FOIP within 10 working days of discovery of the operational issue.

14
15 It is the responsibility of the NDMNRF to verify all reported operational issues within 10
16 working days of notification. For situations where notification was required within 24
17 hours, the operational issue will be verified within 24 hours of that notification.

18 **4.7.1.7 Prevention, Avoidance and Mitigation**

19
20
21 During operations, emphasis is placed on the prevention and avoidance of undesirable
22 activities through training and communication of proper resource stewardship. However,
23 should such an undesirable activity occur, it is the responsibility of the SFL holder to
24 take action to prevent and avoid potential operational issues in a decisive, timely and
25 appropriate manner.

26
27 It is the responsibility of the contractor and OFRL holder to take every reasonable effort
28 and action to prevent and avoid potential non-compliance or operational issues in a
29 decisive, timely and appropriate manner. Where any operating personnel, during
30 ongoing monitoring of operations, identify a situation they believe could be an
31 operational issue(s), they will undertake one of the following actions:

- 32
- 33 1. If they feel it is a violation of the approved plan or a threat to the environment,
34 they will immediately stop the operation and take the necessary steps to stop
35 further possible non-compliance/harm.
 - 36 2. Operators will immediately report any situation to their supervisor who will
37 contact Miisun for clarification. Miisun staff and contractor supervisors will review
38 the concern or issue and if deemed a violation to the approved plan they will put
39 measures in place to mitigate further issues.

3. If the situation cannot be immediately corrected, the NDMNRF will be notified and a certified inspector will submit a report in FOIP that documents their findings and an operational issue.
4. If the activity is not in violation of the approved plan or an immediate threat to the environment, necessary steps will be taken to review the issue to prevent future occurrence.

4.7.1.8 Compliance Reporting Areas

A Compliance Reporting Area is the area of land described for the purposes of planning and implementing a forest Compliance Inspections. It also forms the geographic basis for which a forest operations Compliance Inspection report will be submitted to the Forest Operations Information Program (FOIP) or a written Completion Notice will be filed with the NDMNRF. How forest operations are aggregated or subdivided and how they are identified (e.g. named or numbered) for the purposes of Compliance Reporting Areas are further described in the Annual Work Schedule.

For the purpose of compliance reporting areas on the Kenora Forest, compliance reporting areas (CRA) will either be comprised of multiple sites (aggregated) or will be retained as a single site (maximum 500 ha). The type of compliance reporting area will be dependent on the type of operation that is being reported. Reporting, as described above, can take the form of email notification or formal FOIP reporting.

The CRA will indicate the appropriate number or identifier for the block, road or water crossing as it is referred to in the AWS. The risk-based approach to planning for compliance reporting areas is discussed in 4.7.1.4 Risk Analysis and Management.

Multiple crossings on a forest access road may be grouped within an Access report. Water crossings may only be aggregated when they are a part of a single access operation. Any aggregated water crossings will be identified in the AWS and will share a CRA. A start-up notice will be required for each water crossing but only one FOIP report will be necessary for the CRA. Where all water crossings within the shared CRA are not installed within the first AWS year a FOIP would be required for those completed within that year and a second FOIP will be submitted for the remaining crossings when installed in the future. If an Operational Issue arises at one of the crossings, a separate FOIP report will be required for that crossing and particular issue.

CRAs for renewal, tending, or road maintenance operations will be reported by aggregation of blocks/roads and will be identified at time of reporting. The report will

1 include information on the block numbers/roads and total hectares/km represented in
2 the report.

3

4 **4.7.1.9 Monitoring Compliance of Forest Operations**

5

6 This section will provide a description of monitoring compliance of forest operations on
7 the Kenora Forest. A full description of procedures and timelines associated with
8 compliance monitoring is available from the *Forest Compliance Handbook* (MNRF,
9 2014); directive FOR 07 03 04 and procedure FOR 07 03 05.

10

11 **Forest Operations to be Monitored for Compliance**

12 Forest operations compliance inspections and reports are related to the four operations
13 and their corresponding activities identified below. Activities have been associated with
14 the operations to which the area most closely is related to or are most likely to occur. As
15 well, there will be Activities that are associated with all four operations (i.e. Fire
16 Prevention and General Activities).

17

18 Access Operations

- 19 • Aggregates
- 20 • Area of Concern
- 21 • Fire Prevention
- 22 • Road Construction (new and maintenance)
- 23 • Water Crossing (new and maintenance)
- 24 • General activities

25

26 Harvest Operations

- 27 • Area of Concern
- 28 • Cutting
- 29 • Fire Prevention
- 30 • Wood Measurement/Movement (e.g. Wood Storage Areas)
- 31 • Utilization
- 32 • Road Construction
- 33 • General Activities

34

35 Renewal Operations

- 36 • Pesticide Application
- 37 • Renewal
- 38 • Site Preparation
- 39 • General Activities



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Maintenance Operations

- Pesticide Application
- Tending
- General Activities

Compliance inspection report procedures on the Kenora Forest will follow direction from the *Forest Compliance Handbook* (MNRF, 2014) procedure FOR 07 03 05. The procedure provides a flow chart outlining the process that will be used when confronted with issue management.

In response to direction from Northwest Region NDMNRF (June 2011) and the acknowledgement by Miisun, the reclamation of landings, roadsides and slash/chipper debris will continue to be a priority for consideration when assessing planned and active harvest areas, compliance inspecting and renewal areas. This topic of priority has been discussed at training sessions with forestry supervisors, and field sessions with operators. A heightened awareness to reclaim productive land back is established and will continue. The following has been in place since 2011 and elevated awareness and implementation is done at the contractor level:

Reclamation of Slash Piles:

- Compliance Inspector will indicate and record in Harvest FOIP report if slash areas require piling or if piling is completed.
- Compliance inspection results will be reported in the Annual Report.

Reclamation of Chip Piles:

- Compliance Inspector will record in Harvest FOIP report if chipper debris has been dealt with or not; as per 4.2.2.2 Conditions on Regular Operations – Loss of Productive Land.
- Compliance inspection results will be reported in the Annual Report.

Site Preparation Operations:

- Areas will be recorded in the Renewal FOIP report where pads have been treated and/or renewed.

Reclamation of Landings:

- Landing assessment will be done at time of renewal assessment for areas.

Renewal Operations:



- Sites will be evaluated for appropriate renewal treatments (consistent with most applicable SGR – likely same treatment as applied to adjacent block).

To determine compliance of rutting

- Randomly traverse (minimum 300m) through the harvested area
- Simultaneously, count how many times you cross a disturbance that meets the definition of a rut.

***Rut = Continuous trench or furrow created by machine traffic that is
>=4m long and >=30cm deep (or to bedrock)***

- Calculate % of ruts (i.e. #ruts ÷ metres traversed)

Acceptable Rutting Standard

- <=5% on shallow soils (i.e. 5 ruts for every 100 metres)
- <=10% on other soils (i.e. 10 ruts for every 100 metres)

To determine compliance of site disturbance

- Within the “worst” area of rutting identified above, measure a 0.1 hectare circle (17.85m radius)
- Estimate percentage of circle disturbed by ruts

Acceptable Site Disturbance Standard

- <50% of the 0.1 hectare circle has been disturbed

4.7.1.10 Opportunities for LCC Involvement

The Terms of Reference for the Kenora Forest Local Citizens’ Committee does not contain specific commitments with regard to the involvement of the LCC in the forest operations inspection program and the NDMNRF’s monitoring of forest operations. However, committee members are provided with an annual overview of the forest operations compliance activities during the presentation of the Annual Reports, Annual Work Schedule and from time to time updates of issues and trends. LCC members are also encouraged to participate in the Independent Forest Audit process.

Significant non-compliance issues and recent activities will be brought to the LCC’s attention at regular scheduled meetings in order to provide a sense of awareness as well as educating the LCC members through reporting on the activities in progress on the forest. A standing invitation will be offered for LCC members to join inspection personnel on field inspections by appointment. The LCC will also be given the

1 opportunity to review the forest operations inspections summary (Table AR-6) which
2 forms part of each year's Annual Report.

3

4 **4.7.1.11 NDMNRF District Auditing and Inspection Program**

5

6 The NDMNRF District auditing and inspection program is generally planned and
7 coordinated through priorities, targets and schedules identified in the NDMNRF District
8 Annual Compliance Operating Plan (ACOP). The District ACOP covers the time period
9 of April 1st to March 31st.

10

11 The preparation of the (ACOP) including the forestry portion is coordinated by the
12 Planning and Information Sections Sr. IRM Technician with input from the staff in the
13 Kenora District.

14

15 Planned Compliance Actions are developed based on local compliance issues,
16 NDMNRF's Regional compliance priorities and/or NDMNRF's required business
17 practices. Targets are developed based on risk assessment (See section 4.7.1.4) as
18 well as availability of staff.

19

20 Risk is defined as the degree of certainty of an outcome. Operationally, risk factors such
21 as operator experience, compliance history, and season of harvest are weighed.
22 Operators with a good history and extensive experience may receive less monitoring.
23 Maintaining respectable relationships and frequent communications will contribute to
24 increasing the degree of certainty a positive outcome will be achieved. NDMNRF's risk
25 analysis will be carried out annually based on the above stated priorities, but also
26 include random spot checks of activities deemed to be low priority to ensure a
27 continuation of compliance.

28

29 The NDMNRF Area Staff participate in the review and development of the SFL's annual
30 compliance plan. The identified issues, targets and actions contained in the SFL's
31 compliance plan are considered when developing the district ACOP.

4.7.2 Exceptions

Exceptions are defined as: “All silvicultural treatments in the silvicultural ground rules (Table FMP-4) that are exceptions to the recommendations in the silvicultural guides, and all operational prescriptions and conditions for areas of concern that are exceptions to the specific direction or recommendations (standards and guidelines) in the applicable forest management guides”.

This section of the FMP summarizes the exceptions monitoring programs to be conducted on the management unit, with the detailed monitoring program included in Supplementary Documentation F.

There are no forest management activities classified as “exceptions” in this FMP, therefore Supplementary Documentation F – Monitoring Program for Exceptions is not required.

4.7.3 Assessment of Regeneration Success

An important component of the monitoring program is determining the success of the harvest, renewal and tending operations in regenerating the forest to the desired future forest condition. Table FMP-20 identifies approximately 8,700 ha for formal regeneration assessments to be done in 2022-2032 plan period. There are a variety of methods and procedures that can be employed as part of an overall monitoring program including direct methods such as field inspections and observations, as well as indirect methods such as the use of aerial photography or aerial reconnaissance. Both formal and informal procedures contribute to an effective monitoring program. The monitoring program is comprised of several components: Pre-establishment regeneration assessment, plantation/seeding survival assessments, regeneration condition assessments, assessment of roads/landings/debris pile areas, and regeneration establishment assessment.

Natural regeneration surveys are conducted on all harvest areas with a ‘natural regeneration’ treatment (contained in silvicultural treatment packages in Table FMP-4 Silvicultural Ground Rules)(SGR), to verify the suitability of the renewal prescription and determine if supplemental treatments are required in order to become successfully established.

1 For artificially regenerated areas, during plantation assessments areas that have been
2 planted are assessed two to three (2-3) years after planting to determine the success of
3 the treatment and assess whether or not a re-treatment (i.e. crop failure due to drought
4 conditions) may be required. These are generally ground field checks without formal
5 plots. If, for some reason, the planted sites have had high mortality there may be a
6 good opportunity to replant sites immediately. The next reconnaissance, regeneration
7 condition assessment, is carried out 3-5 years post-treatment, depending on the
8 renewal treatments. These assessments are semi-formal, utilizing a standard
9 methodology with random plots to collect information regarding the status of the
10 regeneration, and to assess the necessity for any retreatments or supplemental
11 treatments and future tending treatments. Those areas requiring tending or
12 supplemental treatment are then scheduled for treatment. Regenerating roads,
13 landings, and debris areas are assessed at this time as well to determine success and
14 re-treatment or supplemental treatment needs.

15
16 The final formal assessment is the regeneration establishment assessment that is a
17 formal survey generally conducted 4-12 years after harvest depending on the forest unit
18 and the SGR applied. The timeframe is stated in the silviculture ground rule in Table
19 FMP-4. The effectiveness of silviculture treatments is related to the achievement of
20 forest management plan renewal objectives in the forest management plan which the
21 stand was harvested and treated. The assessment includes determination of
22 compliance with the minimum regeneration establishment standards stated in Table
23 FMP-4.

24
25 Acquisition of high resolution digital colour imagery of regenerating forest stands is used
26 to aid in determining renewal features such as species, height, site occupancy, density
27 as well as other features such as ecosite, road conditions, etc. The digital imagery
28 provides a standardized, scalable, rectified, auditable, permanent record of the
29 assessment

30
31 Monitoring activities of a regenerating site are considered complete once the area has
32 been declared as successfully “established”. Stands are successfully “established”
33 when assessment results show the average conditions of the stand meet the
34 regeneration standards for establishment within the silviculture ground rule. If an area is
35 identified as not meeting the establishment standard for the SGR, it will be
36 either (a) assessed as successfully meeting the regeneration standard of establishment
37 for a different SGR, or (b) it will be assessed for future treatments and recorded and
38 tracked in the database for future re-assessment. For areas that have underperformed
39 as compared to the establishment standards, the SFL forester may (at their discretion),
40 determine if additional time is required for improved regeneration standard



1 achievement; or based on a minimum polygon size of two to eight (2 to 8) hectares and
2 depending upon the total assessment area, delineate out the portions that meet
3 establishment standards or barely meet the standards. Target the portions with poorer
4 success for retreatment or supplemental treatment and re-assess at a future date, then
5 declare the remaining area as established; or accept the achievement of the broader
6 future FU definition allowing underperforming areas to be balanced by better performing
7 areas when they are reported and included together as part of the same stand.

8
9 Monitoring stands at establishment will allow the stand to be entered into the inventory
10 for future planning and used in future wood supply models. The new stand description
11 used to update the forest resources inventory must have basic parameters measured
12 such as height, species composition and stocking. In the case of intensively managed
13 forest unit strata, a density maximum may also be measured but is not a basic attribute.

14
15 The survey information is stored electronically. The results of the establishment surveys
16 will be reported each year in the Annual Reports submitted for the forest. The NDMNRF
17 will validate the survey results using the same survey methodology as the SFL within
18 one year of receiving the data. If there is a discrepancy between NDMNRF validation
19 results and the SFL assessment results, NDMNRF will contact Miisun to discuss and
20 resolve.

21
22 Should the Local Citizens' Committee express interest in the regeneration assessment
23 program, they are welcome to accompany field surveys and examine captured digital
24 imagery.

25
26 The full monitoring program is contained in Supplementary Documentation G –
27 Monitoring Program for Success of Silvicultural Activities.

1 4.7.4 Roads and Water Crossings

2

3 All existing and newly constructed primary, branch and operational roads, and
4 associated water crossings are subject to inspection and monitoring, to ensure no
5 environmental or safety to public concerns arise. Table FMP-18 summarizes planned
6 and existing road construction and use management for all primary, branch, and
7 operational roads or operational road networks, as well as planned monitoring for each
8 road or road network, for the 10-year period of the FMP.

9

10 While the road/road network is in use for forest management purposes (e.g. Harvest,
11 Renewal, Tending, Transportation and Hauling activities), it will be monitored on an
12 ongoing basis. Where bridges are used for 'heavy truck hauls, a certified inspector will
13 inspect the bridge condition and site at least once a year. Otherwise, SFL bridges will
14 be inspected on a 3-year rotation or upon receipt of a complaint/concern (as per the
15 *Crown Land Bridge Guidelines*, Feb. 2008).

16

17 The yearly schedule for roads and water crossings to be monitored will be included in
18 the Annual Work Schedule (AWS). This yearly schedule will be based upon a risk
19 assessment approach with emphasis on the potential values which could be impacted
20 (fish habitat) and the potential for public safety concerns. The intent will be to inspect
21 roads and water crossings in area of active operations. All roads, which are not being
22 maintained throughout the year, will be inspected at least once every three years as per
23 the FMP and more frequently where circumstances, such as abnormal rainfall, warrant.

24

25 Roads and associated water crossings on the forest are monitored:

- 26 • to ensure safety, functionality, and efficiency of roads and water crossings which are
- 27 actively used by forest operations;
- 28 • to ensure that there are no safety issues associated with any roads or water
- 29 crossings;
- 30 • to ensure that there are no negative environmental impacts associated with any road
- 31 or water crossing.

32

33 Monitoring will be carried out throughout the year as per the FMP road use strategies
34 through Miitigoog's internal monitoring system and as specified below to determine if
35 there are environmental or public safety concerns:

- 36 • Staff and contractor personnel, as part of their normal field duties, will physically
- 37 observe, on a continual basis, the condition of water crossings on maintained
- 38 roads, particularly with respect to the potential for washouts or blockages of

- 1 • culverts, and condition of the physical structure. Problems will be reported to the
2 party responsible for the road.
- 3 • Roads that are SFL responsibility, but not regularly maintained, will be inspected
4 at least once every three years by Miisun or contractor personnel.
- 5

6 The methods used for monitoring will be primarily vehicular travel but may include aerial
7 observation during other activities such as compliance, renewal or establishment
8 surveys. It is important to point out that all crossings may not be observed in each year
9 as operations may not occur at the critical time of potential washout conditions or when
10 water is flowing at its' heaviest. All roads, which are not being maintained throughout
11 the year, will be inspected at least once every three years and more frequently where
12 circumstances, such as abnormal rainfall, warrant. Monitoring of road construction (new
13 and maintenance) and water crossing (new and maintenance) will also be carried out
14 through forest operations compliance inspections and reported through the Forest
15 Operations Inspection Program where activities apply. Roads and associated water
16 crossings and bridge inspections will be reported in the annual report as per the FMPM.

4.8 Fire Prevention and Preparedness

This section describes the wildland fire prevention (Section 4.8.1) and preparedness measures (Section 4.8.2) to be implemented during the 10-year period of the forest management plan, as well as the Modified Fire Response Plan (Section 4.8.3).

Wildland fire prevention and preparedness measures to be implemented during the 10-year period of the forest management plan (Section 4.8.1) apply to the entire management unit. These measures address how NDMNRF, Licensees and Contractors will prevent the start of wildland fires, and how forest workers will be prepared to take immediate action to suppress small fires. These measures will include any business practices and guidelines for modifying industrial operations; developed for fire prevention, mitigation, preparedness and suppression purpose.

NDMNRF, Licensees and Contractors shall adhere to the *Forest Fires Prevention Act* (F.F.P.A.), *NDMNRFs Modifying Industrial Operations Protocol* (MIOPS), *Forest Fire Operations By Forest Industry – Business Practices - Procedure # AFFES:FM:2:15*, the *Crown Forest Sustainability Act* and the Company Annual Fire Plan. As an operational guideline, NDMNRF, Licensees and Contractors will utilize the *Modifying Industrial Operations Protocol* when determining restrictions on operations, as well as, the standard to meet for minimum fire suppression equipment requirements. Ultimately, the *Modifying Industrial Operations Protocol* outlines the minimum standard for fire prevention and preparedness that will be achieved by all industrial forest operations associated with this forest management plan.

4.8.1 Fire Prevention

It is the responsibility of NDMNRF, Miitigoog and its Shareholders, Overlapping Licensees and Contractors to understand and comply with the *Forest Fires Prevention Act* and the *Modifying Industrial Operations Protocol*. The *Modifying Industrial Operations Protocol* will be used on a daily basis by all NDMNRF, Miitigoog Shareholders, Overlapping Licensees and Contractors during the fire season; so that industrial activities are modified as fire danger increases; to reduce the risk of igniting a wildland fire.

To enhance the compliance and understanding of these items the following measures are implemented:

- Daily communication (e.g. phone message or website) will occur with the NDMNRF Fire Management Headquarters by all working in the Kenora Forest during the Fire



- 1 Season to determine the Fire Intensity Codes on a daily basis.
- 2 ➤ Daily communication with Miitigoog Shareholders, Overlapping Licensees and
- 3 Contractors detailing fire activity and fire hazard is carried out with all contractors
- 4 (e.g. email, tailgate meetings, phone, two-way FM radios, etc.).
- 5 ➤ Fire Prevention messages will be broadcast on local radio stations by NDMNRF
- 6 (e.g. wildland fire hazard, exercising caution in the forest, etc.).
- 7 ➤ Miisun field personnel or contractors conduct periodic fire inspections on mechanical
- 8 equipment and forest fire suppression equipment at each operation to assure
- 9 compliance with the *Forest Fires Prevention Act* and company standards. When
- 10 high to very high risk operations are occurring, inspections will be completed prior to
- 11 the start and during early stages of these activities. As well, 1 hour after the end of
- 12 shift ground patrols of harvest areas will be conducted when high to very high risk
- 13 operations occur.
- 14 ➤ Frequency of equipment inspections will be dependent on the fire
- 15 hazard. Inspections will include confirmation that equipment adheres to MIOPs
- 16 standards.
- 17

In the Event of a FIRE:

- 18
- 19
- 20 1. Always ensure that serviceable fire suppression equipment is available including
- 21 pack pumps during the entire fire season;
- 22 2. Assess the fire and if controllable, take the appropriate actions to safely
- 23 extinguish it and seek help from supervisor and crew;
- 24 3. Immediately report the fire to the NDMNRF **310-FIRE (3473)** and Miisun, and
- 25 provide the following information:
- 26 a. Location (*general description, access to area, nearest lake*)
- 27 b. Size
- 28 c. Spread potential (*fresh cutover, standing timber, natural boundaries, wind*
- 29 *direction and speed*)
- 30 d. Values (*equipment, processed wood, tourist camps*)
- 31 e. Actions being taken;
- 32 4. Stay in radio contact until all vital information has been relayed and confirmed;
- 33 5. Take all precautions to remove people from danger;
- 34 6. Continue to action the fire until it is out, or you are relieved by the NDMNRF or it
- 35 becomes too dangerous; and
- 36 7. If equipment needs protecting from potential fire spread, move equipment away
- 37 from fire front to an area of large mineral soil. (i.e. gravel pits, roads). Consider
- 38 travel speeds of machines (grapple vs. tracked buncher). Equipment may need
- 39 to be floated out. Consider availability of transportation vehicles and have them
- 40 in a state of readiness.



4.8.2 Fire Preparedness

NDMNRF and Miitigoog recognize that any forest operation undertaken in Ontario must be done with careful consideration to the prevention of wildland fires. Accidental wildland fire can have a large impact on annual operations or timber supply. Operators must also be prepared to safely take initial action to prevent fire spread, should a fire occur. Under the authority of the *Forest Management Planning Manual* and the *Crown Forest Sustainability Act*, conditions are placed on forest operations through the Annual Work Schedule to provide forest fire prevention and preparedness.

It is Miitigoog policy that Contractors are to take all necessary precautions to prevent forest fires during the course of its operations; to detect, report, and where possible take immediate initial suppression action to minimize any loss resulting from forest fires. Every reasonable attempt will be made to take action on fires on or near the Company's operating areas, to remain on site until the fire is considered to be out or until relieved by the NDMNRF or the situation becomes too dangerous to handle with the available level of skill and/or training.

Annually, a spring meeting (March 15 – April 15) with representatives from the NDMNRF Fire Management Headquarters and the Miitigoog General Manager is organized to prepare for the upcoming fire season, identify training needs, and convey awareness of fire prevention plans and initiatives.

Additionally, an annual fire plan will be issued to all contractors and Miisun staff as part of the AWS that will include forest fire reporting procedures, Kenora Forest Contacts and emergency numbers and prevention and preparedness guidelines.

Trained and Capable, and Limited Operators - As per the *Forest Fires Prevention Act* and the *Provincial Modifying Industrial Operations Protocol*, Licensees and Contractors will be considered either a) trained and capable or b) limited operators. A forest operation, to be considered trained and capable, must meet each of the following criteria:

- 1) **Prevention:** Implementation of an effective prevention program for the type of operation.
- 2) **Suppression:** Minimum resource and equipment availability as identified in Section 1.2 of the *Modifying Industrial Operations Protocol*.
- 3) **Communication:** The ability to communicate and report fires “**immediately**” and to receive or obtain updated information on the fire danger. Satellite phones and

1 FM two-way-radio phones are acceptable means of communication. Cell phones
2 are not advised as their reach is poor outside of the immediate Red Lake area.

3 * **Immediately** - means two-way radio or telephone capabilities from the site to
4 the NDMNRF office.

5 4) **Training:** A minimum 25% of all staff (or at least one person, if there are less
6 than four staff) involved in forest operations on a particular site must be trained to
7 the NDMNRF SP-102 standard.

8
9 Operations that do not meet all of the above “Trained and Capable” criteria will be
10 considered “Limited Operators” with respect to the modifications that will apply to their
11 operations.

12
13 Training for personnel in harvesting and site preparation operations will be trained to the
14 SP-102 Industry certification with refresher training required every four years. Training
15 will be completed prior to the fire season to ensure a minimum 25% of individuals on
16 site will be certified to the SP-102 standard otherwise operations will be treated as
17 limited. Planting and Manual Tending operations will be trained by their respective
18 Contractors to a competent level of fire knowledge based on the fire equipment in their
19 operations. At minimum these companies crew bosses will be trained to SP102
20 Industry certification standards.

21
22 Fire Suppression Equipment - As part of the Compliance Plan, all Licensees and
23 Contractors will inspect their operations and equipment to ensure that they are
24 compliant as per *Modifying Industrial Operations Protocol*, and that equipment is in
25 good working order.

26
27 Most non-mechanical, low-risk forest activities such as timber cruising or regeneration
28 surveying do not require fire suppression equipment. However, labour-intensive
29 activities such as mechanical thinning, hand tending and tree planting do require some
30 suppression tools (minimum of 2 shovels and a soft back pack pump).

1 4.8.3 Modified Fire Response

2
3 Modified Fire Response section speaks immediately to not allowing fire on the
4 landscape and seeks immediate suppression. There may be opportunities on the
5 landscape for the use of wildland fire to support desired objectives such as forest
6 renewal, habitat restoration, ecosystem renewal, etc., under desirable weather
7 conditions.

8
9 Forests are fire dependent ecosystems that rely on periodic wildland fire as a renewal
10 agent. Wildland fire can be used as tool where safe and appropriate, to support land
11 and resource management objectives. The Planning Team through dialogue with
12 NDMNRF fire management representatives, are required to determine that areas for
13 modified fire response be identified as a candidate modified fire response areas.

14
15 The Kenora Forest is a fire dependent forest that was shaped by historic wildland fire.
16 The Kenora Forest has frequent wildland fire disturbances, and requires wildland fire
17 disturbance in certain areas. Analyzing the landscape and identifying areas that can
18 reduce wildland fire risk and support sustainable forest management are part of making
19 an appropriate wildland fire response decision. Under this approach, wildland fires that
20 are an immediate threat to high values such as wood supply will be responded to
21 quickly to minimize damages and disruption. Wildland fires that are not threatening to
22 values can be managed effectively to limit negative impacts and enable the beneficial
23 ecological role of fire.

24 25 **Managed Fire**

26
27 The *Wildland Fire Management Strategy for Ontario* (MNRF, 2014) calls on fire and
28 resource managers, communities and individuals to identify landscape scale or site
29 specific values-at-risk, opportunities for beneficial fire, and general management
30 objectives on the landscape. This requires a balanced approach to fire management
31 that ranges from prompt and complete suppression, to monitoring fires that renew and
32 sustain the forest without threat to human values. This balanced approach when
33 responding to fires is essential to the concept of Appropriate Response on which the
34 Fire Strategy is based. An appropriate response to a wildland fire is the set of actions
35 over the life of the fire, intended to produce the best outcome given the competing
36 desires to:

- 37
38 1. Realize the benefits of fire (contribute to ecological function, improve resource
39 values, reduce hazardous fuels)

- 1 2. Manage the detrimental impacts of fire (loss of property, infrastructure and
- 2 resource values, and economic and social disruptions); and
- 3 3. Manage the costs of wildland fire (monitoring, alternative suppression tactics,
- 4 divisional support).

5
6 There are opportunities for resource managers to take advantage of the appropriate
7 response concept by identifying opportunities for beneficial fire, that may help achieve
8 ecological or hazard reduction objectives as long as this is documented in an approved
9 resource management plans (e.g. FMP). This forest management plan authorizes the
10 application of a managed fire response to be used in designated areas in this
11 Sustainable Forest License area to help to achieve both an ecological and fire hazard
12 reduction.

13
14 Within the Kenora Forest some areas have been identified as either “Limit Fire” or
15 “Allow Fire” candidate sites (See Figure 40 below for geographic areas):

16
17 **Limit Fire** locations are where there is a high risk of adverse impacts from a
18 wildland fire. These are areas that are in or adjacent to important harvest areas,
19 wildlife values, and/or social and public values.

20
21 **“Limit Fire” Candidate Sites:** The Kenora Forest operates on a caribou habitat
22 management DCHS in the northern portion of the management unit. The DCHS
23 divides the forest into a mosaic of current and future large, landscape patches.
24 The schedule of harvest recognizes two blocks of mature to over mature forest
25 for harvest in the B period (2022-2042, DCHS Blocks B1 and B2). These areas
26 are of high strategic (objective achievement) and economic importance. As such,
27 these areas are defined as candidates for *High Priority Protection* and fire
28 response. These areas contribute to the short and mid-term objectives including
29 landscape class objectives, harvest volume objectives, and caribou habitat
30 objectives.

31
32 In addition, the entire Kenora Forest DCHS is strategically important to contribute
33 caribou habitat functions and sustain the caribou population for adjacent
34 Woodland Caribou Provincial Park, Red Lake Forest, and Whiskey Jack Forest,
35 all of which have experienced significant disturbance in the past and are currently
36 recovering large patches of habitat. The Kenora Forest is expected to sustain a
37 caribou population which will contribute re-occupancy of caribou to these
38 surrounding recovering landscapes. The Kenora Forest also shares a caribou
39 population with neighboring Manitoba and is the connecting middle section of the
40 Sydney Caribou Range. The entire Kenora Caribou zone is a candidate for “Limit
41 Fire” modified response.



1 **FINAL PLAN NOTE:** Wildfires in 2021 in the Kenora Forest caribou zone burnt a
2 majority of the mature timber. Continued aggressive fire suppression will be
3 required to allow the forest to age naturally, thereby restoring previous levels of
4 caribou habitat.

5
6 **Allow Fire** areas are locations are areas which could benefit from a burn and are
7 recognized as having few or no risks to near future timber, ecological values,
8 and/or social and public values. At the time of fire, NDMNRF fire management
9 representatives will take these identified areas into account but appropriate
10 response to the fire will always consider safety and the reduction of negative
11 social or economic impacts to all assets and resources. This means that fires in
12 areas where ecological benefits have been identified may be suppressed in order
13 to protect the public or other interests.

14
15 **“Allow Fire” Candidate Sites:** Areas, such as the Aulneau Peninsula, have
16 numerous dead standing trees caused by years of Jack Pine Budworm
17 infestation. This has created an abundance of fuel in the forest. While these
18 trees do serve an ecological process, the benefits of a stand replacing event,
19 such as fire, would benefit the area. Candidate areas are defined as those
20 meeting the following parameters: Island or peninsula areas in which there are
21 few or no values at risk located along Lake of the Woods, Big Sand Lake
22 lakeshore; and areas affected by forest insects or diseases such as the Aulneau
23 Peninsula and Big Island.

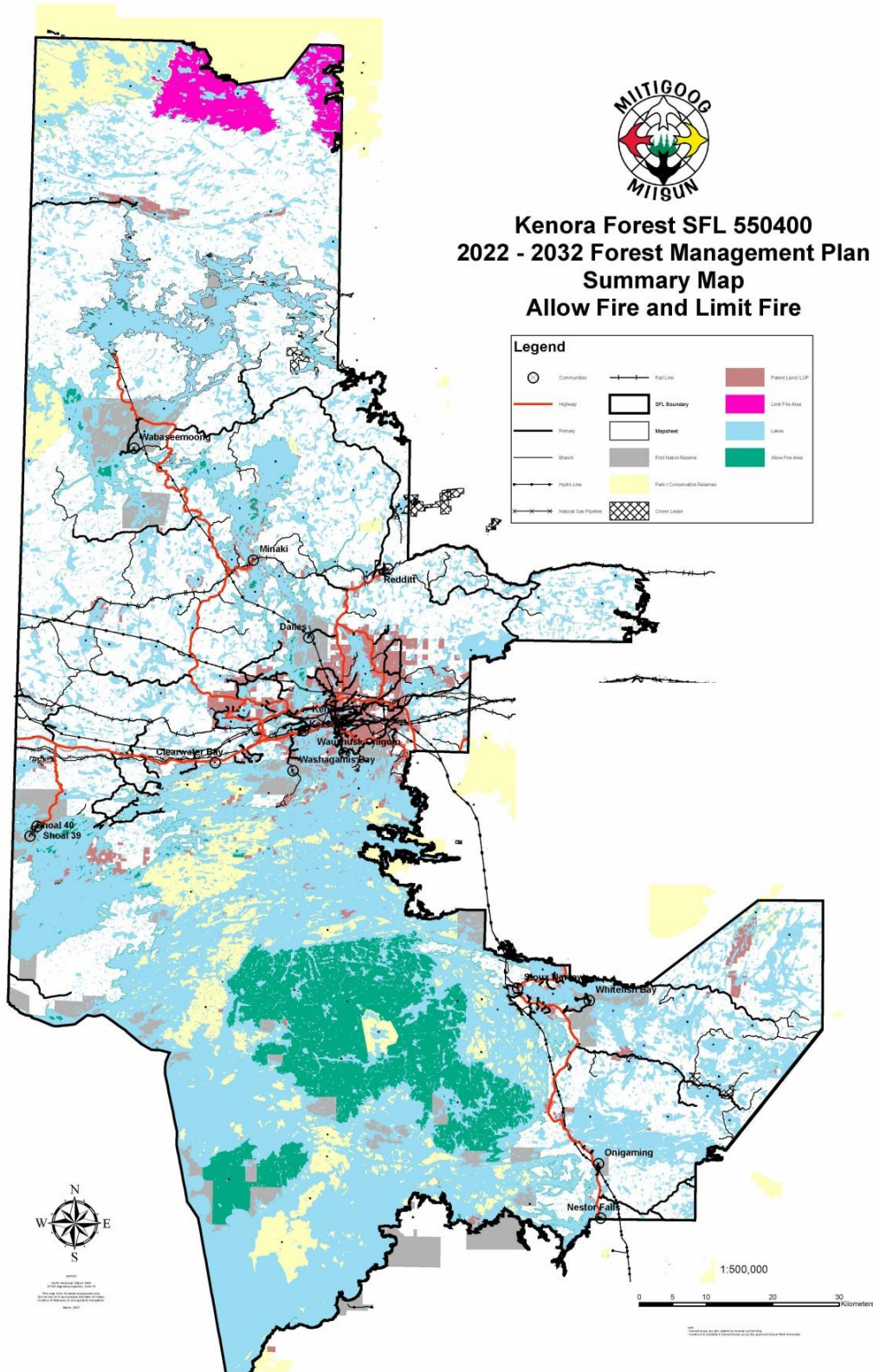
24 25 **Appropriate Response and Identified Candidate Locations**

26
27 The *Guidelines for Modified Response and Monitoring during Managed Fire Operations*
28 (OMNR 2006) and any related updates will be used to evaluate and refine these
29 candidate sites, on an annual basis, as a screening criterion for final site selection.
30 Example criteria within this guideline include consideration of: the probability of fire
31 containment; risk of fire escape; potential for negative impacts on adjacent values; and,
32 the cost effectiveness of the preferred response option. In addition, the final site
33 selection will ensure adherence to objectives of the *Wildland Fire Management Policy*
34 *for Ontario* (MNRF, 2014) to prevent the loss of human life and injury; prevent and
35 mitigate losses, economic disruption and social disruption; and to promote the
36 understanding of the ecological role of fire and use fire to benefit resource
37 management. The final locations will be documented in the fire response plan to
38 provide detailed operational directions regarding the preferred fire response option and
39 the detailed location (e.g. maps).

40



1 Figure 40 Kenora Forest Candidate Locations for “Allow Fire” and “Limit Fire”



2

4.9 Comparison of Planned Operations to the Long-Term Management Direction

This section of the plan text documents the assessment of the expected effect of planned types and levels of harvest, renewal and tending operations on the progress towards meeting the objectives in the long-term management direction (Section 3.7).

The assessment includes:

Section 4.9.0 Revision of Plan Start 2022 Land Base Resulting from 2021 Wildfires

Section 4.9.1 Comparison of the planned harvest, renewal and tending operations to the projections in the LTMD;

Section 4.9.2 Comparison of the distribution of harvest to the projections in the LTMD;

Section 4.9.3 Comparison of the stand conditions (e.g., species composition, site class) of the planned harvest areas to the eligible harvest areas;

Section 4.9.4 Examination of the effect of the age class distribution and the projected harvest volume of the planned harvest area, on the achievement of the LTMD;

Section 4.9.5 Examination of the effect of the amount of projected unutilized harvest volume on the achievement of the LTMD;

Section 4.9.6 A discussion of the effects on objective achievement and sustainability of implementation of planned operations.

Section 4.9.7 Conclusion of the Comparison of Planned Operations to the LTMD

Section 4.9.8 NDMNRF Decision and Rationale for Continued Use of LTMD for 2022-2032 FMP after 2021 Wildfires

FINAL PLAN NOTE: Due to significant wildfires in 2021 between Draft and Final plans, a comparison of the impact of these fires on FMP LTMD implementation was expanded beyond that required by the FMPM. This comparison and review included Plan Start 2022 changes (added Section 4.9.0). Section 4.9.6 Assessment of Objective Achievement is expanded to include the revised Plan Start 2022 and achievement with Plan End 2032 projections with final planned operations. Added Section 4.9.8 includes documentation of NDMNRF's decision and rationale to support the continued use of the LTMD in this final FMP.

4.9.0 Revision of Plan Start 2022 Land Base Resulting from 2021 Wildfires

In 2021 after Draft Plan submission, several fires burnt area on the Kenora Forest. Most notably, Fire Kenora 51 (KEN51, started June 2021) burnt approx. 200,600 ha from the Umfreville Lake – Werner Lake area and to the north. Kenora 51 burnt most of the mature forest in the Kenora Forest caribou zone (109,900 ha on the Kenora Forest). After starting in May 2021, KEN27 burnt 4,480 ha in MEA4, and two other smaller fires in the Willard Lake area burnt 2,062 ha (KEN25) and 1,162 ha (KEN30).

The estimated 2021 fire perimeters and the revised forecast depletions to Plan Start 2022 were used to create a revised plan start BMI for comparison to the LTMD land base. The updated Plan Start condition allowed for comparison to LTMD and was the framework on which the final plan harvest allocations were built and reviewed for the Comparison to LTMD (Section 4.9) and the Determination of Sustainability (5.0).

Plan Start 2022 Boreal Landscape Guide indicators for forest condition (amount and texture) were compared for the LTMD and for the revised Plan Start 2022 (with wildfires) in Section 2.1.3.2 (Landscape Classes, Old Growth, Area if Red Pine – White Pine, Upland Conifer, Young Forest) and Section 2.1.3.3.4 (Species at Risk - caribou refuge/winter habitat indicators, online DCHS). See those sections for a graphic comparison of Plan Start 2022 changes, and see Section 4.9.6 for the data comparison of Plan Start changes.

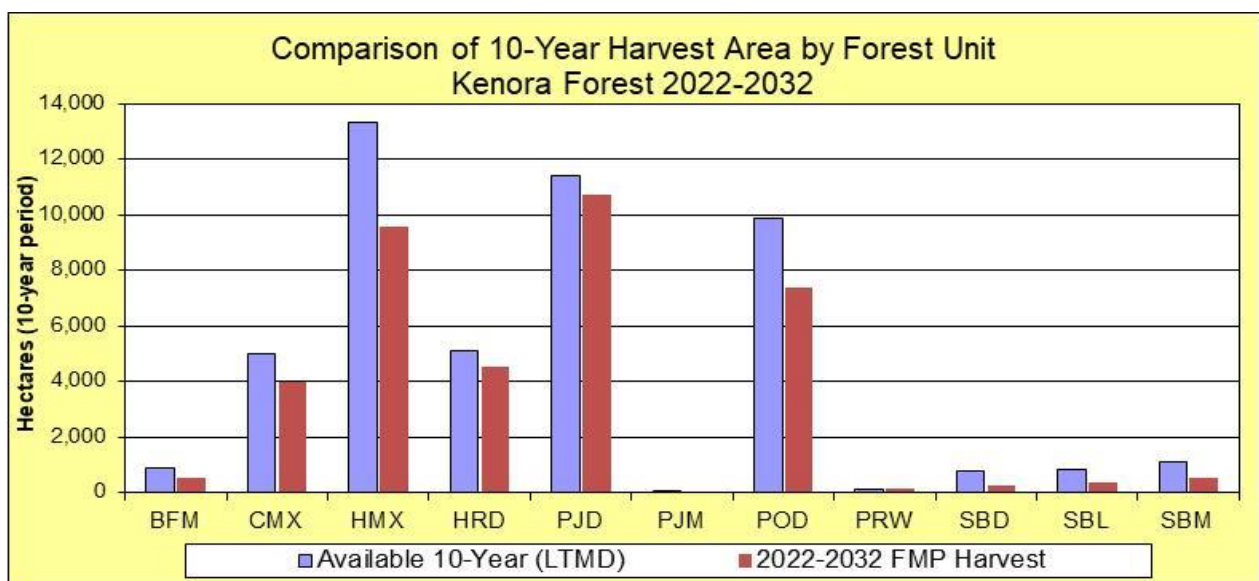
While the 2021 wildfires were significant to the regional landscape, the majority of the Kenora Forest impact was to the age class structure of the caribou zone. The forest composition of recently burnt area was not changed, and will not change until establishment surveys or a new forest inventory provides information on which to change the depleted forest type. However the age of all burnt area is now estimated to be 1 year old at Plan Start 2022. This reduced the amount and texture of mature-old forest, caribou winter habitat and caribou refuge habitat. The amount of young forest has significantly increased which is now closer to the Simulated Range of Natural Variation for young forest on the Kenora Forest. Other land base indicators at Plan Start 2022 changed but to lesser degrees (See Section 4.9.6).

4.9.1 Comparison of the planned harvest, renewal and tending operations to the projections in the LTMD

Final planned harvest operations are 22% lower than Stage Two LTMD preferred harvest (approx. 10,000 ha lower). The planned harvest allocations are similar to the LTMD by forest unit, and the planned allocations were also close by 20-year age class. Draft Plan planned harvest in the caribou zone was removed for the final plan due to the 2021 wildfires resulting in the loss of merchantable operating blocks. Minor adjustments were needed after LTMD, during planning for operations (Draft and Final plans), to refine area of concern prescriptions and to accommodate consideration for some specific stakeholder concerns. All FMP tables were updated to reflect the results of the refined Planned Operations.

The LTMD Available Harvest Area by forest unit is documented Table FMP-8 (projected available harvest area over a 100-year planning horizon) and the planned harvest area is reported in Table FMP-12. A comparison of projected AHA to planned harvest area by forest unit is portrayed graphically in Figure 41. The total LTMD available harvest area (AHA) for the 10-year period projected is 48,587 hectares. The total planned harvest area for the 10-year plan period is 38,109 ha, and it does not exceed the available harvest area for any individual forest unit (Table 54). The planned harvest area was shown to be very comparable to LTMD AHA by 20-year age class in Section 4.3.1, and Figure 38.

Figure 41 Comparison of Available Harvest Area and Planned Harvest Area by Forest Unit 2022-2032



27



Table 54 Comparison of LTMD and Planned Harvest by Forest Unit 2022-2032

Planned Harvest Operations (in hectares)				
Forest Unit	Harvest Area (ha)			Percentage of LTMD AHA Allocated
	10-Year LTMD Harvest	10-Year Planned Harvest	Difference *	
BFM	905	558	-348	62%
CMX	5,009	4,000	-1009	80%
HMX	13,323	9,575	-3748	72%
HRD	5,093	4,559	-534	90%
PJD	11,436	10,737	-699	94%
PJM	42	35	-7	83%
POD	9,907	7,379	-2528	74%
PRW	141	130	-11	92%
SBD	768	259	-509	34%
SBL	855	354	-501	41%
SBM	1,109	524	-585	47%
TOTAL	48,587	38,109		
Source:	FMP-8	FMP-12		

Planned harvest by forest unit varies from 34% – 94% of the LTMD available harvest area by forest unit. The lower allocation of spruce forest units resulted from the LTMD spruce AHA originally being predominately in the caribou zone (now not allocated due to wildfire). Some spruce harvest area was reallocated elsewhere in the Kenora Forest to facilitate operational block layout and wood supply commitments (demand for spruce-pine-fir).

The planned harvest area for 2022-2032 is lower than LTMD and natural regeneration of the forest is greater than LTMD due to 2021 wildfires, therefore the planned regeneration area greatly exceeds that projected in the LTMD. A comparison of the renewal by broad treatment type was conducted to confirm the planned renewal of harvested area was consistent with the projected LTMD renewal by treatment type in this plan period (Table 55). Broad treatment types include Natural regeneration, Plant and Seed, all of which may include projected tending activities. Tending is planned to occur on 2,341 ha (Table FMP-17), however a direct comparison of tending area to LTMD is not possible as tending activities were combined within broad treatment types for strategic LTMD modelling inputs.

Planned regeneration in Table FMP-17 by broad treatment type is greater than renewal area in the LTMD, as it now includes 109,826 ha in the caribou zone, naturally regenerating after Fire KEN51 in 2021. Planting and Seeding are forecast for less area

1 than in the LTMD due to the lower harvest area, however the overall proportion appears
 2 even lower than LTMD proportions since the greater amount of natural regeneration
 3 skews/reduces the overall proportions. Of harvested area, 61% is projected for Natural
 4 Regeneration, 15% for Planting and 24% for Seeding, all comparable to LTMD
 5 projections.

6
 7 Table FMP-17 was forecast based on knowledge of areas harvested in the latter years
 8 of the 2012-2022 FMP, as well as areas to be harvested in the first 8-9 years of this
 9 2022-2032 FMP. The planned level of renewal is expected to result in successful
 10 establishment of harvested areas, in accordance with Table FMP-4 Silvicultural Ground
 11 Rules establishment regeneration standards. Silvicultural Ground Rules and/or planned
 12 renewal treatments may be changed during plan implementation by a Registered
 13 Professional Forester, based on actual site conditions encountered and professional
 14 judgment.

15
 16 **Table 55 Comparison of LTMD and Planned Renewal Treatments 2022-2032**

10-Year Planned Renewal Operations (ha)					
Treatment Type	LTMD Renewal	Planned Renewal	Difference *	% Total	% of Harvested
Natural Regeneration*	30,313 (63%)	131,844	- 8,295	90%	61%
Artificial Regeneration - Plant	6,150 (13%)	5,318	- 832	4%	15%
Artificial Regeneration - Seed	11,639 (24%)	8,676	- 2,963	6%	24%
Total Regeneration	48,102	145,838	97,736		
Supplemental/Retreatment	n/a	0			
Tending	n/a	2,341			
Source:	LTMD-07	FMP-17			

* Natural regeneration includes 109,826 ha for Fire KEN51, in addition to natural regeneration projected for 22,018 ha of harvested area.

18
 19



4.9.2 Comparison of the Distribution of Harvest to the Projections in the LTMD

The 10-year spatial distribution of proposed harvest areas were mapped and analyzed non-spatially in SFMM (“FinalTest5” results documented in Supp. Doc. B – Analysis Package, Appendix 7) and spatially in Ontario’s Landscape Tool for Stage Five: Final Plan. The refined harvest areas were run through the SFMM model and tested spatially in OLT to confirm continued spatially acceptable results related to operations and management objective achievement (results in Section 4.9.6). Ontario’s Landscape Tool was used to compare landscape pattern results for LTMD to Final Plan planned harvest allocations. OLT scenario files were provided to NDMNRF with the Final FMP for verification of spatial results.

The overall distribution of harvest by subunit is similar in the final FMP as compared to LTMD (T1, Table 56), with the exception of the removal of all planned harvest from the caribou zone and northern subunit Z15 for this FMP (and likely for 40 years to come). The DCHS will be revised for the 2032-3042 FMP, which will dictate the timing of future harvest in the caribou zone. This DCHS timing will also dictate timing of future road construction to the caribou zone and northern subunits in the non-caribou zone.

Table 56 Comparison of LTMD and Planned Harvest by Subunit 2022-2032

TERM 1 ANNUAL HARVEST AREA by SUBUNIT (ha)					
SU	T1 AHA	T2 AHA	T3 AHA	T4 AHA	T1 - LTMD
A1					-
A2					-
B1					153
B2					169
C			9	56	-
D					-
DEA1	119	192	121	131	235
E					-
ELK	268	94	242	219	236
MEA1	184	452	398	485	201
MEA2	359	220	296	150	382
MEA3	11	108	36	72	128
MEA4	57	55	25	43	93
Z01					-
Z02	166	130	140	299	48
Z03	16	49	28	25	12
Z04	192	216	300	365	265
Z05	216	118	181	192	115
Z06	71	148	236	203	154
Z07	256	312	383	213	265
Z08	63	229	308	134	283
Z09	173	132	180	103	198
Z10	309	280	368	383	338
Z11	499	319	131	359	546
Z12	679	526	296	208	717
Z13	171	39	33	80	141
Z14		482	97	147	-
Z15		25	2	8	179
TOTAL	3,810	4,125	3,811	3,875	4,859

- 1 The revised assessment of spatial objective achievement is included in Section 4.9.6.
- 2 As compared to LTMD, spatial objective achievement is now worse for caribou zone
- 3 spatial indicators as a result of the amount of 2021 wildfire in the caribou zone at Plan
- 4 Start 2022. Since all harvest was removed for this FMP (as it had burnt), the forest
- 5 manager is not negatively impacting these indicators, nor can the forest manager
- 6 improve them in the short or mid-term. Only natural aging of the forest over time will
- 7 help restore previous spatial distribution of caribou habitat and mature-old forest in the
- 8 caribou zone.
- 9

4.9.3 Comparison of Stand Conditions of the Planned Harvest Areas and Eligible Harvest Areas

The same management decisions for harvest eligibility were included in the SFMM model, and Planned Harvest eligibility. There is minimal variation in allocation by forest unit and age class between LTMD and FMP Planned Harvest. These changes resulted from inclusion of refinement of operational blocks for merchantability, area of concern planning for operational areas, and consideration for some specific stakeholder concerns. The majority of proposed operations were the same as the operations projected for the LTMD therefore the average stand conditions are similar for planned harvest areas and eligible harvest area. As discussed in Section 4.3.1, typically age class differences were within the next age class older or younger. Refinement of planned harvest operations after LTMD resulted in minimal shifts in planned harvest age class areas. The area weighted average stand conditions for LTMD-07 and draft plan allocations were compared, resulting in very similar average stand conditions (Table 57). The comparison confirms that in the refinement of FMP planned harvest, the intent of the LTMD projected harvest was maintained.

Table 57 Variance between LTMD and Planned Harvest Average Stand Conditions

Forest Unit	Long-Term Management Direction				Planned Harvest			
	Mean Age (years)	Mean Height (m)	Mean Stocking (%)	Mean Site Class	Mean Age (years)	Mean Height (m)	Mean Stocking (%)	Mean Site Class
BFM	90	15	0.55	1.60	84	15	0.58	1.7
CMX	90	16	0.62	2.00	93	17	0.67	2.1
HMX	75	20	0.66	2.40	84	22	0.71	2.4
HRD	78	21	0.70	2.40	84	23	0.75	2.4
PJD	84	17	0.71	2.50	90	18	0.77	2.4
PJM	93	17	0.75	3.00	93	17	0.70	3.0
POD	73	21	0.72	2.20	85	24	0.77	2.3
PRW	96	17	0.67	1.90	101	20	0.75	2.0
SBD	103	15	0.59	1.70	98	16	0.70	1.2
SBL	121	14	0.62	2.50	124	13	0.73	2.7
SBM	104	15	0.55	1.70	103	16	0.58	1.6

* Area weighted average harvest area attributes as of Plan Start 2022.

4.9.4 Effect of the Age Class Distribution and the Projected Harvest Volume on the Achievement of the LTMD

A comparison of LTMD and planned harvest by 20-year age class was included in Section 4.3.1. There is minimal variation in harvest allocation by forest unit and age class between LTMD and planned harvest areas. The refined final planned harvest areas were run through the SFMM model (by analysis unit and 10-year age class) and tested spatially in Ontario's Landscape Tool for Stage Five: Final Plan to confirm continued spatial acceptability related to operations and management objective achievement. Since the SFMM model includes fixed harvest eligibility minimum limits, and the same harvest eligibility limits were used for planned harvest, the minor harvest change by age class is negligible (no negative effects).

As previously mentioned, harvest was entirely removed from the caribou DCHS and subunit Z15 due to Fire KENN51, in the rest of the forest minimal harvest revisions occurred between draft and final plans, not significant enough to impact strategic landscape pattern of the whole Kenora Forest.

The LTMD projected a total available harvest volume of 4,872,000 net merchantable cubic metres during the 10-year period of the FMP. The planned harvest area is expected to provide 4,286,533 total net merchantable cubic metres of wood, similar (92%) to the LTMD projection, given that planned harvest area is less than the full LTMD available area. Planned harvest volumes for Table FMP-13 were estimated based on specific stand level volumes at Plan Start 2022 whereas LTMD utilized average forest unit yield curves. The accuracy of estimated volumes associated with planned harvest stands are considered the best estimate, and are generally sufficient to meet current wood supply commitments (See Section 4.3.6).

4.9.5 Effect of the Amount of Projected Unutilized Harvest Volume on the Achievement of the LTMD

All planned harvest volume (net merchantable and undersize and defect) is projected to be utilized in both the LTMD and Planned Operations. This projection is considered reasonable, since utilization of wood fibre from the Kenora Forest is expected to be available for all harvested volumes. While past plan periods experienced underutilization, current harvesting on the Kenora Forest has increased and more closely approximates planned levels.

4.9.6 Effect on Objective Achievement and Sustainability of Implementation of Planned Operations

This section provides a summary of projected objective achievement with planned operations (and consideration for 2021 wildfires and revised forecast depletions on the Kenora Forest) as compared to achievement projected in the LTMD. The following table (Table 58) compares objective achievement by indicator at LTMD and Final Plan stages.

Of the 30 indicators in the FMP, 18 of the indicators can be assessed in the FMP and 12 will be assessed only after implementation of the plan.

LTMD Assessment - Of the 30 plan indicators:

- 14 indicators **Achieved** desirable levels or movement towards desirable level through meeting the target level within the plan period;
- 3 indicators are **Partially Achieved** with achievement of or movement towards target levels;
- 1 indicator does **Not Achieve** desirable or target levels:
Indicator 3b: Young forest patch size frequency; and
- 12 indicators are measured in the **Future**, after plan implementation.

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Final Plan Assessment - Of the 30 plan indicators:

- 10 indicators **Achieved** desirable levels or movement towards desirable level through meeting the target level within the plan period;
- 3 indicators are **Partially Achieved** with achievement of or movement towards target levels;
- 5 indicators do **Not Achieve** desirable or target levels:
Indicator 3b: Young forest patch size frequency
Indicator 1b: Texture of Caribou Winter Habitat – revised to Not Achieved
Indicator 1c: Texture of Caribou Refuge Habitat – revised to Not Achieved
Indicator 1e: On-line Caribou DCHS (%) – revised to Not Achieved
Indicator 2c: All Ages Red Pine and White Pine Forest Unit Area – revised to Not Achieved; and
- 12 indicators are measured in the **Future**, after plan implementation.

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Table 58 Comparison of Projected Objective Achievement between LTMD and Final Plan with revised Plan Start 2022

Comparison of Planned Operations to LTMD					Strategic modelling projections based on: LTMD-07							
					FMP projections based on final FMP planned harvest 2022-2032							
Indicator	LTMD	(Oct. 14 with wildfires)	Desirable Level		Target (by Plan End)	LTMD Projection				Assessment	Final Plan Assessment Compared to LTMD	
	Plan Start Level	REVISED Plan Start 2022 (with fires)				Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)	Long (100 yrs)			
(1a) Caribou Habitat Area:												
Refuge (ha)	71,574	51,983	54,045	to	61,458	maintain within the desirable level (move towards)	72,246	52,173	70,061	74,732	PARTIALLY ACHIEVED: Caribou refuge and winter habitats are projected to be above the desirable level for 160 years.	Similar to LTMD. PARTIALLY ACHIEVED: Caribou refuge and winter habitats are below the IQR for 40 years, but move towards the desirable level in plan period (target met). Both habitats are projected to be above the desirable level from the mid-to long-term (40-160 years).
Winter - Combined (ha)	29,131	5,243	18,667	to	45,161	maintain desirable level (move towards)	29,678	6,941	60,218	54,570		

LTMD-07			FinalTest5 (SFMM with revised Plan Start)		
(1a) Caribou Habitat in the Caribou Zone (Ha):			(1a) Caribou Habitat (Caribou Zone):		
10-year Period (Start)	Refuge	Winter Combined	Term	Refuge	Winter
2022	71,994	29,678	T1	52,259	5,348
2032	72,246	62,576	T2	52,451	7,087
2042	70,061	60,218	T3	52,484	7,174
2052	70,379	59,854	T4	52,615	7,126
2062	73,525	59,823	T5	69,027	55,338
2072	72,140	55,137	T6	69,131	55,445
2082	74,354	58,541	T7	72,210	64,400
2092	74,544	59,066	T8	78,714	64,386
2102	73,705	52,656	T9	76,751	57,567
2112	74,841	56,290	T10	75,768	55,217
2122	74,732	54,570	T11	74,582	52,655
2132	71,550	49,338	T12	68,960	42,855
2142	72,324	54,457	T13	69,612	50,055
2152	72,500	56,434	T14	68,966	49,099
2162	72,900	57,599	T15	69,727	53,261
2172	75,748	61,694	T16	73,393	57,637
2182	73,832	57,543	T17	75,024	58,635
BLG Desirable Upper	61,458	45,161	BLG Upper	61,458	45,161
BLG Desirable Lower	54,045	18,667	BLG Lower	54,045	18,667

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4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

Indicator	LTMD (Oct. 14 with wildfires)		Desirable Level	Target (by Plan End)	LTMD Projection			Assessment	Final Plan Assessment Compared to LTMD		
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)			Long (100 yrs)	
(1b) Texture of Caribou Winter Habitat (Combined) (hexagon frequency distribution by mean proportion):	(%)		Move towards mean, focusing on >60% proportion classes. Mean:	Move towards or exceed the mean for >60% proportion classes.			N/A	N/A	ACHIEVED: Desirable level is overachieved with significant movement towards, then above, the mean proportion of 61-100% concentrations at both assessment scales. Limited harvest in the caribou zone in this 2022-2032 plan period results in forest aging into higher concentrations of coarse texture caribou winter habitat. Target level is achieved.	Poorer than LTMD due to fires. NOT ACHIEVED: 2021 wildfires significantly reduced amount and patchiness (texture) of caribou winter habitat. Texture is projected to increase closer to desirable levels in approx. 40 years as habitat ages into suitability.	
60 km2 Hexagon Scale:											
1 - 20% concentration	38%	91.5%	17%		0%	87.4%					
21 - 40% concentration	20%	4.1%	17%		3%	7.3%					
41 - 60% concentration	24%	3.5%	22%		10%	3.8%					
61 - 80% concentration	17%	0.9%	30%		45%	1.5%					
81 - 100% concentration	1%	0.0%	15%		42%	0.0%					
300 km2 Hexagon Scale:											
1 - 20% concentration	5%	100.0%	8%		0%	100.0%					
21 - 40% concentration	66%	0.0%	22%		0%	0.0%					
41 - 60% concentration	30%	0.0%	32%		0%	0.0%					
61 - 80% concentration	0%	0.0%	34%		68%	0.0%					
81 - 100% concentration	0%	0.0%	6%		32%	0.0%					
(1c) Texture of Caribou Refuge Habitat (hexagon frequency distribution by mean proportion):	(%)		Move towards mean, focusing on >60% proportion classes. Mean:		Move towards or exceed the mean for >60% proportion classes.						
60 km2 Hexagon Scale:											
1 - 20% concentration	0%	0.0%	0%	0%		0.0%					
21 - 40% concentration	0%	15.5%	2%	0%		15.5%					
41 - 60% concentration	0%	20.2%	12%	3%		20.2%					
61 - 80% concentration	17%	43.3%	34%	18%		42.6%					
81 - 100% concentration	83%	21.0%	53%	79%		21.7%					
300 km2 Hexagon Scale:											
1 - 20% concentration	0%	0.0%	0%	0%		0.0%					
21 - 40% concentration	0%	0.0%	0%	0%		0.0%					
41 - 60% concentration	0%	21.9%	8%	0%		21.7%					
61 - 80% concentration	0%	78.1%	43%	0%		78.3%					
81 - 100% concentration	100%	0.0%	49%	100%		0.0%					

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4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

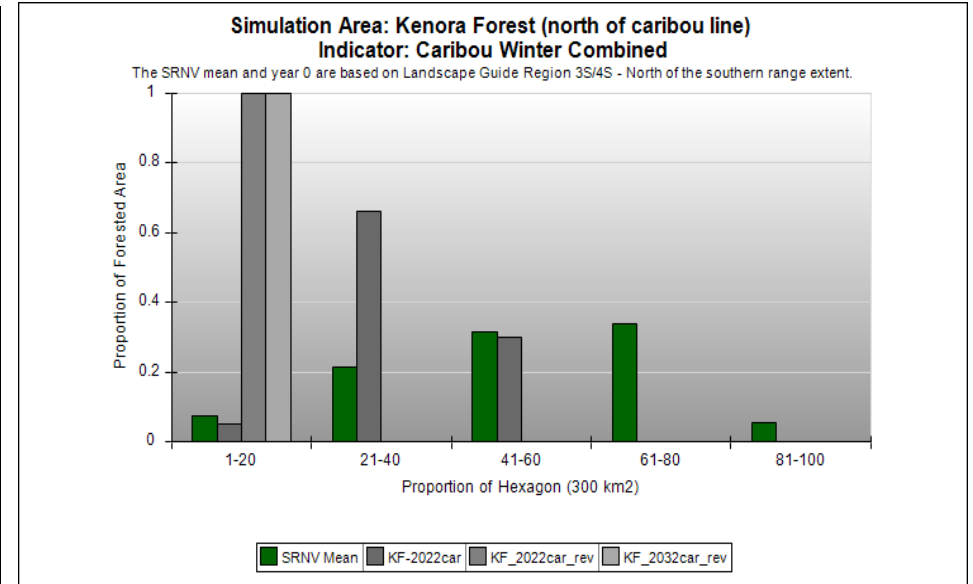
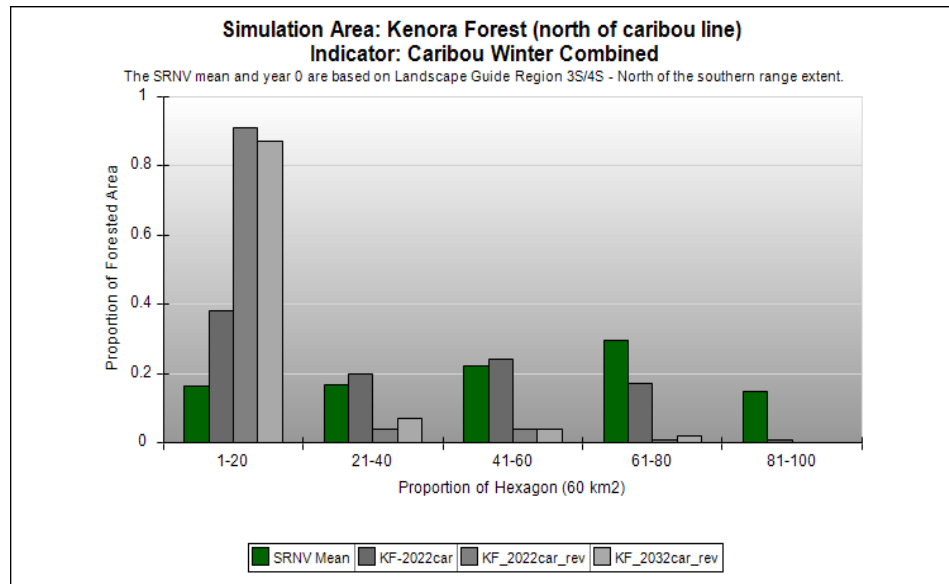
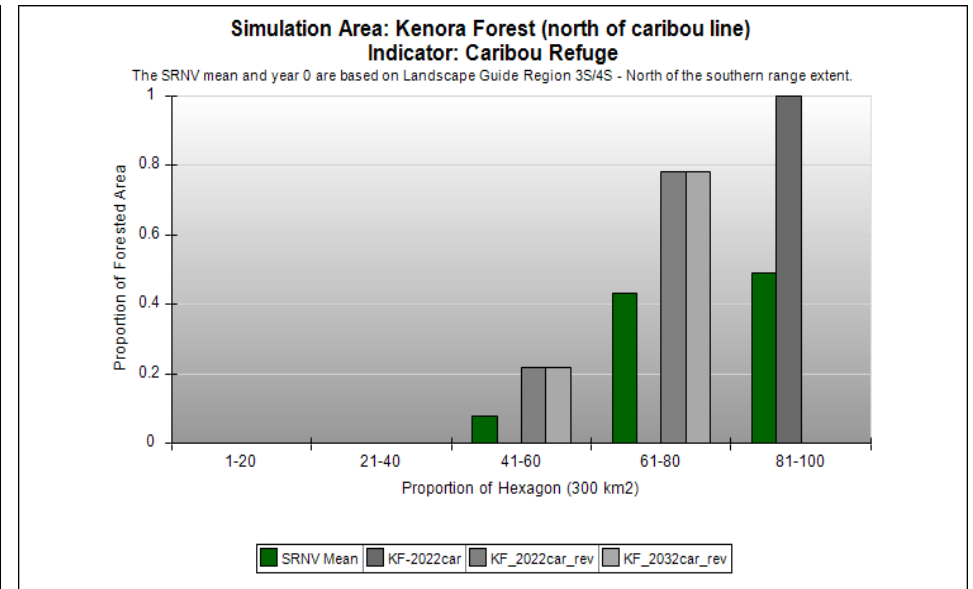
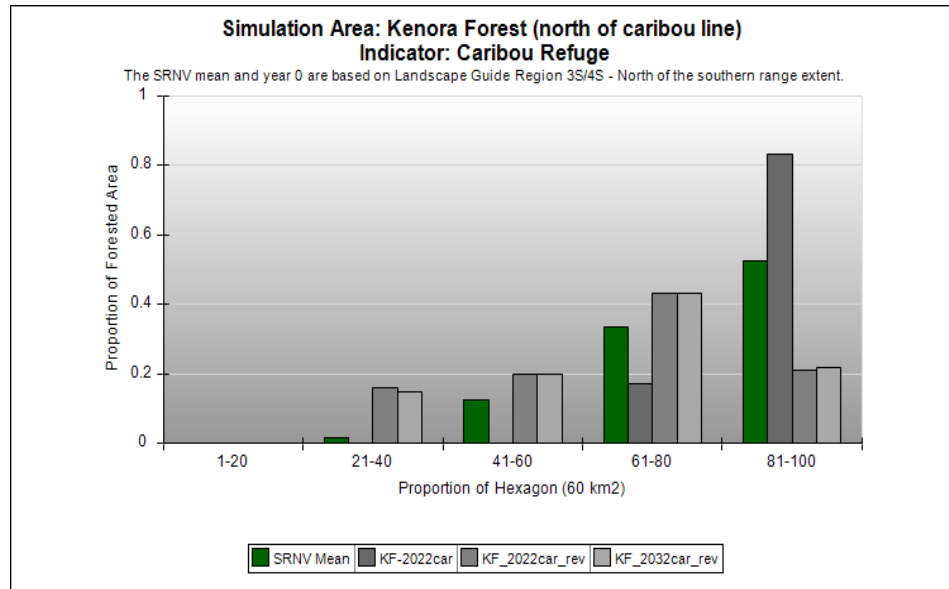
Indicator	LTMD	(Oct. 14 with wildfires)	Desirable Level	Target (by Plan End)	LTMD Projection			Assessment	Final Plan Assessment Compared to LTMD		
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)			Long (100 yrs)	
(1b) Texture of Caribou Winter Habitat (Combined) (hexagon frequency distribution by mean proportion):	(%)		Move towards mean, focusing on >60% proportion classes. Mean:	Move towards or exceed the mean for >60% proportion classes.			N/A	N/A	ACHIEVED: Desirable level is overachieved with significant movement towards, then above, the mean proportion of 61-100% concentrations at both assessment scales. Limited harvest in the caribou zone in this 2022-2032 plan period results in forest aging into higher concentrations of coarse texture caribou winter habitat. Target level is achieved.	Poorer than LTMD due to fires. NOT ACHIEVED: 2021 wildfires significantly reduced amount and patchiness (texture) of caribou winter habitat. Texture is projected to increase closer to desirable levels in approx. 40 years as habitat ages into suitability.	
60 km2 Hexagon Scale:											
1 - 20% concentration	38%	91.5%	17%		0%	87.4%					
21 - 40% concentration	20%	4.1%	17%		3%	7.3%					
41 - 60% concentration	24%	3.5%	22%		10%	3.8%					
61 - 80% concentration	17%	0.9%	30%		45%	1.5%					
81 - 100% concentration	1%	0.0%	15%		42%	0.0%					
300 km2 Hexagon Scale:											
1 - 20% concentration	5%	100.0%	8%		0%	100.0%					
21 - 40% concentration	66%	0.0%	22%		0%	0.0%					
41 - 60% concentration	30%	0.0%	32%		0%	0.0%					
61 - 80% concentration	0%	0.0%	34%		68%	0.0%					
81 - 100% concentration	0%	0.0%	6%		32%	0.0%					
(1c) Texture of Caribou Refuge Habitat (hexagon frequency distribution by mean proportion):	(%)		Move towards mean, focusing on >60% proportion classes. Mean:		Move towards or exceed the mean for >60% proportion classes.						
60 km2 Hexagon Scale:											
1 - 20% concentration	0%	0.0%	0%	0%		0.0%					
21 - 40% concentration	0%	15.5%	2%	0%		15.5%					
41 - 60% concentration	0%	20.2%	12%	3%		20.2%					
61 - 80% concentration	17%	43.3%	34%	18%		42.6%					
81 - 100% concentration	83%	21.0%	53%	79%		21.7%					
300 km2 Hexagon Scale:											
1 - 20% concentration	0%	0.0%	0%	0%		0.0%					
21 - 40% concentration	0%	0.0%	0%	0%		0.0%					
41 - 60% concentration	0%	21.9%	8%	0%		21.7%					
61 - 80% concentration	0%	78.1%	43%	0%		78.3%					
81 - 100% concentration	100%	0.0%	49%	100%		0.0%					

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4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement



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4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

Indicator	LTMD	(Oct. 14 with wildfires)	Desirable Level	Target (by Plan End)	LTMD Projection				Assessment	Final Plan Assessment Compared to LTMD	
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)	Long (100 yrs)			
(1d) Conifer Purity in Jack Pine and Black Spruce LGFUs:	(% Pj+Sb+Sw)		Maintain or increase percentage of jack pine and spruce in PJD, PJM, SBD, SBL, and SBM.	Same as desired level.	N/A	N/A	N/A	N/A	(future assessment after plan implementation)	(Same as LTMD - future assessment after plan implementation)	
	PJD	95%									95%
	PJM	91%									91%
	SBD	95%									95%
	SBL	90%									90%
SBM	89%	89%									
(1e) Amount and arrangement of on-line Caribou DCHS (% of DCHS area with block avg >60 years old):	28%	0%	>= 40%	Move towards, then maintain desirable level	2032: 76% 2042: 70%	0% (DCHS to be revised for 2032 FMP)	2062: 55% 2082: 59%	2102: 47% 2122: 47%	ACHIEVED: Desirable level is achieved 2032 onwards, once large fire ages into being online. Target level is achieved.	Poorer than LTMD due to fires. NOT ACHIEVED: for next 60 years, as recent fires age into online habitat (block avg >60 years old).	
(1f) Planned and actual percent of total upland conifer harvest area successfully regenerated to upland conifer (PJD, PJM, SBD, SBM).	NA		100%	Same as desirable level.					(future assessment after plan implementation)	(Same as LTMD - future assessment after plan implementation)	
(2a) Landscape Class Area:	(ha)		(ha)						PARTIALLY ACHIEVED: Desirable levels are achieved for ML lowland Conifer and ML upland Conifer. ML balsam exceeds IQR, and ML hardwood/mix meets target level to decrease and move towards by end of planning horizon.	Similar to LTMD	
Mature and late balsam fir	18,014	14,543	12,782 to 17,982	decrease and maintain	22,356	18,560	27,940	48,155			
Mature and late lowland conifer	38,317	31,851	23,354 to 28,328	decrease and maintain	37,991	31,798	37,116	24,737			
Mature and late upland conifer	207,290	179,802	152,976 to 224,820	maintain	201,568	175,877	188,104	220,884			
Mature and late hardwood	145,804	143,906	43,706 to 65,315	decrease	126,430	135,116	118,297	87,103			

LTMD-07

Indicator:	Mature and Late Successional:							
	10-year Period (Start)	PreSap +Sap	Imm Conifer	Imm Hwd	Balsam	Conifer	Hardwood	Lowland
2022	40,952	136,142	68,484	18,070	208,260	141,825	38,522	
2032	71,296	127,974	62,335	22,356	201,568	126,430	37,991	
2042	83,480	124,584	68,340	27,940	188,104	118,297	37,116	
2052	87,465	111,983	66,320	29,060	196,817	118,109	36,109	
2062	86,422	64,500	71,548	30,212	241,764	111,148	38,122	
2072	92,801	79,599	73,985	30,805	229,619	103,904	30,863	
2082	95,458	95,688	76,685	31,579	216,531	96,103	28,795	
2092	96,357	105,916	65,775	35,663	209,839	99,432	27,224	
2102	91,399	112,787	55,748	40,052	214,809	98,332	26,112	
2112	93,250	115,342	48,773	44,492	216,797	94,169	25,553	
2122	93,562	118,394	43,889	48,155	220,884	87,103	24,737	
2132	91,813	119,822	43,403	46,890	228,113	80,773	23,899	
2142	91,525	117,655	43,794	42,291	233,647	76,129	29,319	
2152	92,046	117,454	45,549	43,598	233,746	71,101	30,260	
2162	94,174	115,300	47,154	44,702	233,323	67,447	31,486	
2172	94,456	116,467	49,031	45,098	234,358	62,673	31,290	
2182	100,015	113,384	50,528	45,379	241,715	56,588	24,937	
Desirable Upper	181,443	52,727	145,430	17,982	224,820	65,215	28,328	
Desirable Lower	101,058	29,333	81,015	12,782	152,976	43,706	23,354	

FinalTest5 (SFMM with revised Plan Start)

(2a) Area by Landscape Class (Productive ha)	Mature and Late Successional:							
	Ha	PreSap +Sap	Imm Conifer	Imm Hwd	Balsam	Conifer	Hardwood	Lowland
T1	148,288	76,997	61,777	14,574	180,569	138,026	32,020	
T2	152,658	75,600	67,094	18,465	175,907	128,763	31,966	
T3	168,105	73,234	69,154	21,382	163,592	121,219	31,760	
T4	80,554	155,131	70,272	23,237	169,202	116,783	31,347	
T5	82,824	154,962	76,777	24,802	169,943	106,595	28,494	
T6	84,701	169,703	80,540	24,956	158,977	97,559	26,067	
T7	88,754	172,746	77,144	28,749	152,976	98,015	23,354	
T8	92,299	96,101	69,475	35,428	220,370	97,849	29,658	
T9	94,581	100,419	61,960	41,896	220,249	93,504	27,668	
T10	97,027	104,640	56,351	46,413	219,852	88,640	26,550	
T11	97,033	111,033	52,387	50,036	217,586	83,582	26,188	
T12	99,016	114,802	51,790	51,864	213,115	78,117	27,370	
T13	104,988	118,527	50,454	53,351	204,960	74,957	28,444	
T14	108,972	119,244	50,634	53,696	200,148	72,226	30,195	
T15	108,059	120,950	51,184	53,630	196,447	69,333	35,108	
T16	102,401	127,093	51,963	51,734	196,717	68,241	36,338	
T17	97,919	130,738	52,782	55,651	199,814	64,181	33,182	
BLG Upper	181,443	52,727	145,430	17,982	224,820	65,215	28,328	
BLG Lower	101,058	29,333	81,015	12,782	152,976	43,706	23,354	



4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

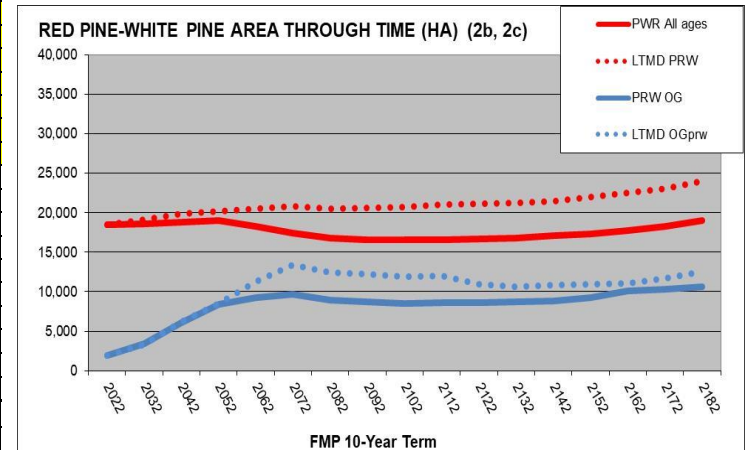
Indicator	LTMD	(Oct. 14 with wildfires)	LTMD Projection				Assessment	Final Plan Assessment Compared to LTMD		
	Plan Start Level	REVISED Plan Start 2022 (with fires)	Desirable Level	Target (by Plan End)	Short (10 years) Plan End 2032	REVISED Plan End 2032 Final			Medium (20 yrs)	Long (100 yrs)
(2b) Old Growth Forest Area:	(ha)		(ha)						ACHIEVED: All Old growth desirable levels are achieved in long-term. Short-term targets show movement towards.	Similar to LTMD
Lowland Conifer	4,194	3,958	12,236 to 17,281	increase	7,543	7,021	10,703	16,333		
Upland Conifer	24,764	17,623	47,362 to 79,383	increase and maintain	64,587	51,350	99,305	72,559		
Mixedwood and Hardwood	24,780	21,256	55,649 to 78,344	increase and maintain	65,495	61,198	107,532	58,000		
White Pine and Red Pine	1,969	1,928	increase	increase	3,325	3,389	6,136	10,931		
(2c) All ages red pine and white pine forest unit area (ha)	18,488	18,487	increase towards 39,135 ha	increase	19,101	18,639	19,901	21,125	ACHIEVED: Desirable and target levels achieved. Actual increase may be operationally greater than strategically modelled.	POORER than LTMD. NOT ACHIEVED: While the Plan Start 2022 PRW forest unit area is maintained for 40 years, it does not appreciably increase through time as desired. Reduced harvest over the next 20 years, as a result of 2021 wildfires, limits the areas available to be renewed to the PRW forest unit. Actual increase in PRW may be greater than strategically modelled through planting for forest unit conversion (SFMM FinalTest5 run data)

LTMD-07

(2b) Old Growth by Grouping (Productive forest ha)				
10-year Period (Start)	Upland Conifer	Lowland Conifer	Hardwood /Mix	Red Pine-White Pine
2022	30,442	4,217	25,043	1,953
2032	64,587	7,543	65,495	3,325
2042	99,305	10,703	107,532	6,136
2052	106,354	14,954	107,129	8,532
2062	102,941	15,215	104,869	11,261
2072	102,002	14,463	96,365	13,404
2082	104,980	17,058	80,042	12,471
2092	132,777	17,614	65,720	12,248
2102	103,877	18,042	57,640	11,889
2112	84,770	17,135	56,724	12,058
2122	72,559	16,333	58,000	10,931
2132	57,511	13,841	58,000	10,671
2142	50,000	14,060	58,000	10,847
2152	51,423	16,127	58,000	10,990
2162	50,752	16,137	58,000	11,075
2172	50,000	15,222	58,000	11,734
2182	50,000	15,734	58,000	12,585
BLG Desirable Upper	79,383	17,281	78,344	increase
BLG Desirable Lower	47,362	12,236	55,649	1,969

FinalTest5 (SFMM with revised Plan Start)

(2b) Old Growth by Grouping (Prod. ha)				
Term:	Upland Conifer	Lowland Conifer	Hardwood /Mix	Red Pine-White Pine
T1	23,416	3,980	21,178	1,928
T2	58,200	7,046	61,008	3,389
T3	84,239	10,128	94,715	6,075
T4	86,316	13,960	100,281	8,356
T5	88,154	12,816	97,964	9,295
T6	87,803	15,183	92,724	9,689
T7	90,513	16,132	74,821	8,891
T8	85,542	13,678	58,827	8,676
T9	68,267	12,977	56,299	8,498
T10	52,121	12,236	55,649	8,568
T11	75,164	12,236	55,649	8,617
T12	63,237	12,236	55,649	8,684
T13	53,106	12,236	55,649	8,802
T14	51,472	12,236	55,649	9,235
T15	50,875	12,236	55,649	10,098
T16	51,129	12,266	55,649	10,339
T17	53,780	18,743	55,649	10,662
BLG Upper	79,383	17,281	78,344	increase
BLG Lower	47,362	12,236	55,649	1,969



4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

Indicator	LTMD	(Oct. 14 with wildfires)	Desirable Level	Target (by Plan End)	LTMD Projection			Assessment	Final Plan Assessment Compared to LTMD
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)		
(2d) Upland Jack Pine and Spruce: (ha) PJD+PJM+SBD+SBM	233,327	232,984	290,514 to 343,729	increase	245,886	232,778	253,738	296,969	ACHIEVED: Desirable and target levels achieved with increase in upland pure conifer area into desirable level range. Similar to LTMD. ACHIEVED: While the 2022 level of upland conifer is only maintained during this 10-year plan period, the long-term projection is to achieve the desirable level within 80 years.
(2e) Young Forest Area: (ha) All Plan Forest Units <36 years	83,576	185,435	129,712 to 227,291	increase	97,545	190,258	124,897	129,712	ACHIEVED: Desirable and target levels achieved with increase in young forest area into desirable level in long-term 100 years. Improvement over LTMD. ACHIEVED: 2021 wildfires increased Plan Start amount of young forest to within desirable range, which is maintained through this plan period and through the long-term.

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LTMD-07

10-year Period (Start)	(2d) Upland Conifer	(2e) Young <36 yrs
2022	241,172	104,723
2032	245,886	97,545
2042	253,738	124,897
2052	263,799	142,869
2062	270,650	145,702
2072	276,657	142,984
2082	284,625	139,162
2092	290,712	136,484
2102	292,502	132,333
2112	294,820	129,740
2122	296,969	129,712
2132	302,308	129,712
2142	310,000	131,584
2152	311,188	131,666
2162	310,772	133,985
2172	310,000	136,493
2182	310,000	141,496
BLG Desirable Upper	343,729	227,291
BLG Desirable Lower	290,514	129,712

FinalTest5 (SFMM with revised Plan Start)

Term:	(2d) Upland Conifer	(2e) Young <36 yrs
T1	241,172	183,262
T2	244,895	194,506
T3	252,184	220,139
T4	262,422	182,884
T5	270,429	135,784
T6	277,971	135,214
T7	285,841	135,307
T8	290,712	136,171
T9	291,523	136,201
T10	291,000	137,083
T11	290,712	137,391
T12	290,712	139,256
T13	290,810	145,304
T14	290,712	149,568
T15	290,712	150,226
T16	290,712	147,243
T17	290,712	143,400
BLG Upper	343,729	227,291
BLG Lower	290,514	129,712

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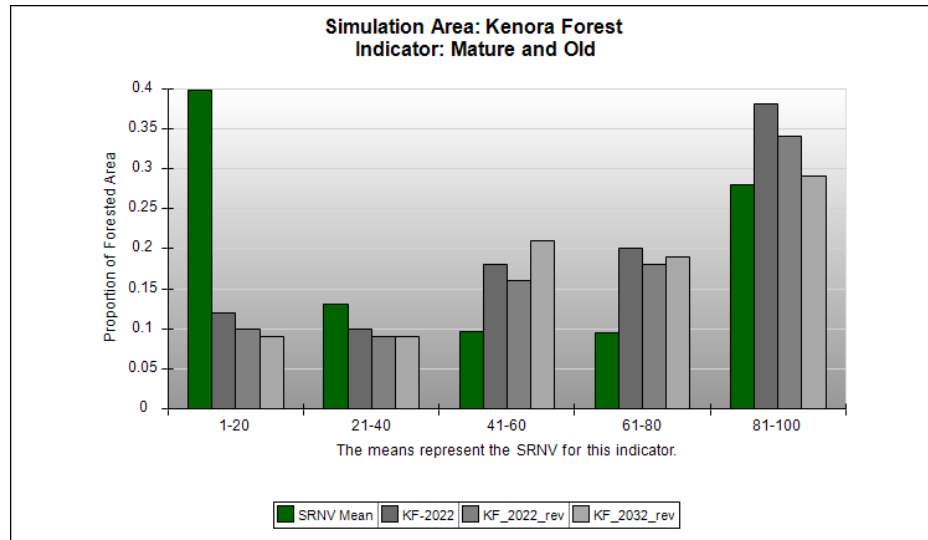
4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

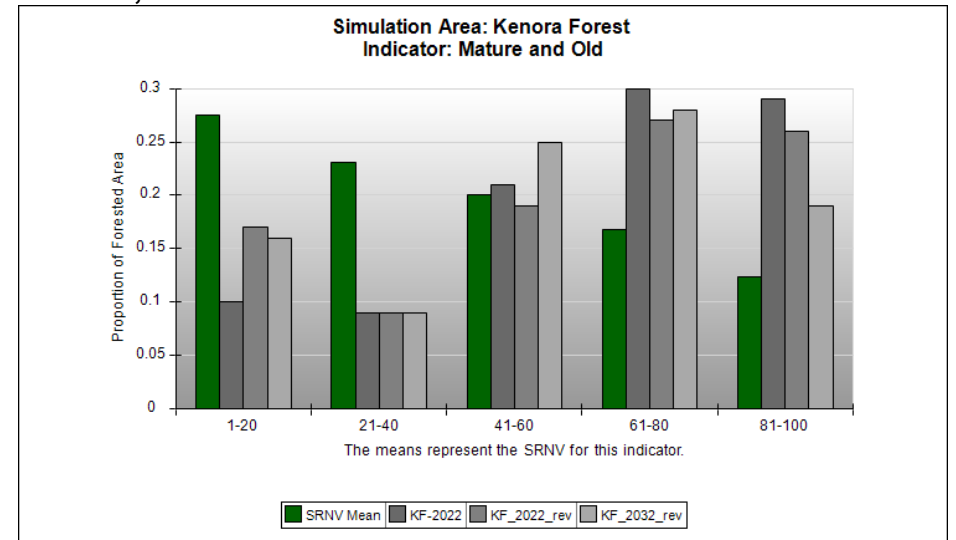
Indicator	LTMD	(Oct. 14 with wildfires)	Desirable Level	Target (by Plan End)	LTMD Projection			Assessment	Final Plan Assessment Compared to LTMD
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)		
(3a) Texture of mature and old forest (hexagon frequency distribution by mean proportion):			Move towards mean, with a focus on the two concentration classes > 60%. Mean:						
500 ha Hexagon Scale:				Move towards or exceed the mean for >60% proportion classes.			N/A	N/A	ACHIEVED: Mature and Old Forest amount and texture is above the desirable level at Plan Start, and is projected to decrease only 1% during this plan period. Target level is achieved. Strategies are being implemented to defragment certain areas and also to plan harvest areas in patches of currently mature/old forest. Results of the defragmentation strategy are evident in the short-term with the reduction of the proportion of the 21-60% classes on the Kenora Forest. Movement towards the mean concentrations in future FMPs is expected to improve.
1 - 20% concentration	12%	10.1%	40%		11%	21.7%			
21 - 40% concentration	10%	8.8%	13%		9%	8.9%			
41 - 60% concentration	18%	16.5%	10%		21%	21.4%			
61 - 80% concentration	20%	18.1%	10%		23%	19.2%			
81 - 100% concentration	38%	34.2%	28%		34%	28.8%			
5,000 ha Hexagon Scale:									
1 - 20% concentration	10%	16.6%	28%		10%	18.9%			
21 - 40% concentration	9%	9.2%	23%		7%	8.8%			
41 - 60% concentration	21%	18.5%	20%		25%	25.2%			
61 - 80% concentration	30%	26.7%	17%	34%	27.7%				
81 - 100% concentration	29%	26.3%	12%	24%	19.4%				

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Scale: 500 ha



Scale: 5,000 ha



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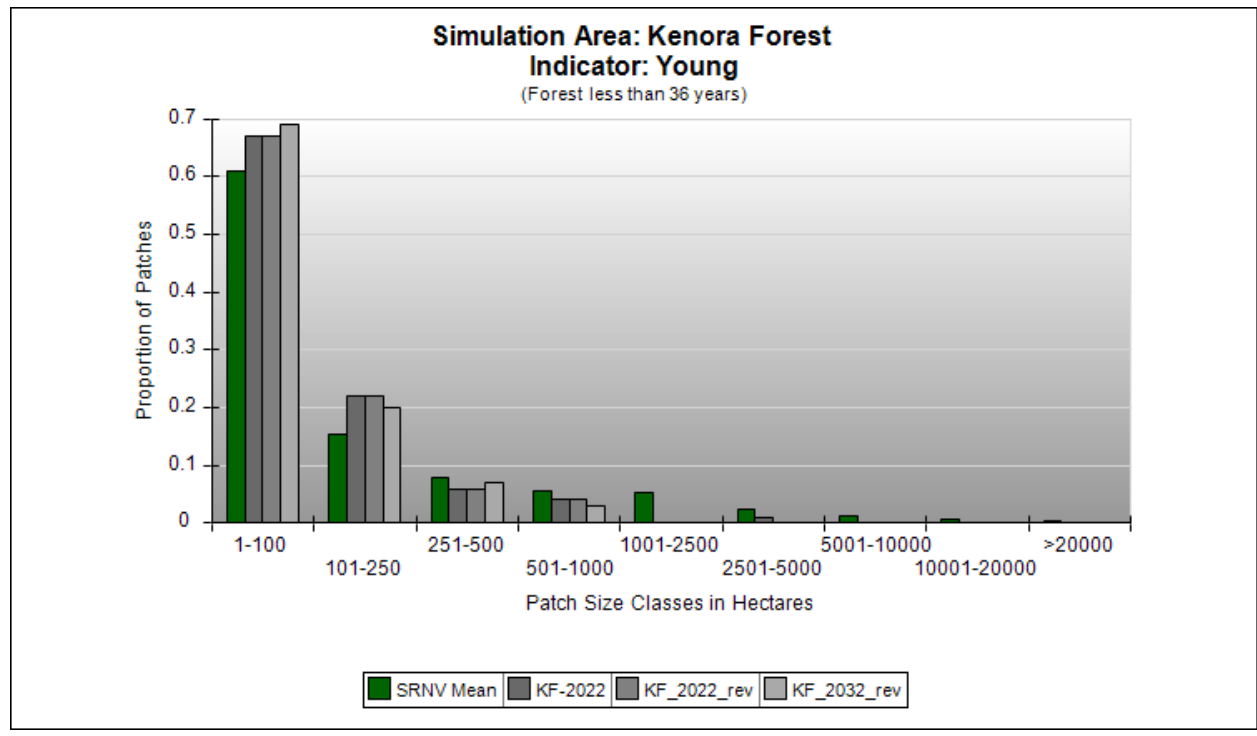


4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

Indicator	LTMD	(Oct. 14 with wildfires)	Desirable Level	Target (by Plan End)	LTMD Projection			Assessment	Final Plan Assessment Compared to LTMD	
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)			Long (100 yrs)
(3b) Young forest patch size: (frequency by size class ha)			Move towards mean. Mean:	Same as desirable level.			N/A	N/A	NOT ACHIEVED: Frequency of small patches of young forest are projected to increase (away from mean, desirable level) on the Kenora Forest during the 10-year period. Desirable and target levels are not expected to be achieved until the long-term with implementation of harvest to defragment the forest and create more, larger young forest over many planning periods.	Similar to LTMD.
< 100	67%	67.4%	61%		68%	69.4%				
101-250	22%	21.5%	16%		23%	20.2%				
251-500	6%	6.4%	8%		6%	6.6%				
501-1,000	4%	3.6%	6%		3%	3.1%				
1,001-2,500	0%	0.3%	5%		0%	0.3%				
2,501-5,000	1%	0.0%	2%		0%	0.2%				
5001-10,000	0%	0.3%	1%		0%	0.0%				
10,001-20,000	0%	0.3%	1%		0%	0.0%				
>20,000	0%	0.3%	0%		0%	0.2%				

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4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

Indicator	LTMD	(Oct. 14 with wildfires)	Desirable Level	Target (by Plan End)	LTMD Projection				Assessment	Final Plan Assessment Compared to LTMD
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)	Long (100 yrs)		
(4a) Habitat Proportion by Moose Emphasis Area:			Move towards and maintain range:							
MEA #1 - Aulneau Peninsula:				Move towards or maintain within proportion range by habitat type, by MEA					<p>ACHIEVED: Overall achievement is very good. Minor deviations (3) from habitat desirable or target range achievement as noted below. All other MEAs and habitat types are projected to be within the desirable ranges with LTMD preferred harvest implemented.</p> <p>MEA #1 - Browse increases to within desirable range, Hwd/Mix is maintained within range, MatCon is maintained 2% above range.</p> <p>MEA #2 - Browse and Hwd/Mix are maintained in desirable ranges, MatCon decreases 6% towards range (target achieved) and remains 3% above range.</p> <p>MEA #3 - Browse increases to within desirable range, Hwd/Mix is maintained within range, MatCon increases 1% and remains below range.</p> <p>MEA #4 - All habitats maintained within desirable ranges.</p>	<p>Similar to LTMD.</p> <p>ACHIEVED: 2021 wildfires increased Browse percentages in MEA #3 and MEA #4 at Plan Start 2022. Plan End 2032 habitat proportions with planned harvest are within or moving towards desirable percentages for all MEA habitat types.</p>
Browse Producing Forest	3%	3%	5-30%		5%	4%	N/A	N/A		
Hardwood/Mixedwood Forest	43%	42%	20-55%		41%	39%	N/A	N/A		
Mature Conifer Forest	37%	36%	15-35%		37%	36%	N/A	N/A		
MEA #2 - Maybrun										
Browse Producing Forest	13%	13%	5-30%		19%	20%	N/A	N/A		
Hardwood/Mixedwood Forest	34%	32%	20-55%		31%	29%	N/A	N/A		
Mature Conifer Forest	44%	43%	15-35%		38%	34%	N/A	N/A		
MEA #3 - North English River										
Browse Producing Forest	3%	42%	5-30%		8%	38%	N/A	N/A		
Hardwood/Mixedwood Forest	42%	32%	20-55%		36%	32%	N/A	N/A		
Mature Conifer Forest	8%	8%	15-35%		9%	10%	N/A	N/A		
MEA #4 - South English River										
Browse Producing Forest	13%	38%	5-30%	12%	36%	N/A	N/A			
Hardwood/Mixedwood Forest	36%	28%	20-55%	33%	26%	N/A	N/A			
Mature Conifer Forest	30%	20%	15-35%	31%	21%	N/A	N/A			

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4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

Indicator	LTMD	(Oct. 14 with wildfires)	Desirable Level	Target (by Plan End)	LTMD Projection				Assessment	Final Plan Assessment Compared to LTMD		
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)	Long (100 yrs)				
(4b) Frequency of Young Forest Patch Size by MEA:												
MEA #1 - Aulneau Penn.<100 ha	93%	95%	100% of young forest patches in the <100, 101-250, and 251-500 ha size classes	Move towards or maintain the young forest patch size frequency for the smallest three size classes.	91%	93%	N/A	N/A	PARTIALLY ACHIEVED: Overall achievement is good. Only MEA #3 moves away from the desirable range, with an 11% increase of larger patches in the 501-1,000 ha size class. All other MEAs are projected to meet desirable level (with all young forest patches <=500 ha) with LTMD preferred harvest implemented. MEA #1- achieved with all patches <= 250 ha MEA #2 - improved, and achieved with all patches <= 500 ha MEA #3 - moves away from desirable level with added 11% young forest frequency in 501-1,000 ha size class at plan end. Harvest pattern may be improved through operational planning. MEA #4 - improved, and achieved with all patches <= 500 ha	Similar to LTMD. PARTIALLY ACHIEVED: 2021 wildfires increased percentages of 2,501-10,000 ha young forest patches in MEA #3 and MEA #4 at Plan Start 2022. Plan End 2032 frequency of young forest patches with planned harvest are moving towards desirable distribution of young forest patches in MEAs, except for MEA #3 that moves away (same as assessed for LTMD).		
101-250 ha	7%	5%			9%	7%	N/A	N/A				
251-500 ha	0%	0%			0%	0%	N/A	N/A				
501-1,000 ha	0%	0%			0%	0%	N/A	N/A				
1,001-2,500 ha	0%	0%			0%	0%	N/A	N/A				
2,501-5,000 ha	0%	0%			0%	0%	N/A	N/A				
5001-10,000 ha	0%	0%			0%	0%	N/A	N/A				
10,001-20,000 ha	0%	0%			0%	0%	N/A	N/A				
>20,000 ha	0%	0%			0%	0%	N/A	N/A				
MEA #2 - Maybrun:	67%	67%					62%	64%			N/A	N/A
101-250 ha	15%	13%					28%	25%			N/A	N/A
251-500 ha	11%	12%					10%	7%			N/A	N/A
501-1,000 ha	7%	8%					0%	4%			N/A	N/A
1,001-2,500 ha	0%	0%					0%	0%			N/A	N/A
2,501-5,000 ha	0%	0%					0%	0%			N/A	N/A
5001-10,000 ha	0%	0%					0%	0%			N/A	N/A
10,001-20,000 ha	0%	0%					0%	0%			N/A	N/A
>20,000 ha	0%	0%					0%	0%			N/A	N/A
MEA #3 - N. English R:	64%	58%					48%	50%			N/A	N/A
101-250 ha	17%	14%					38%	0%			N/A	N/A
251-500 ha	19%	14%					3%	0%			N/A	N/A
501-1,000 ha	0%	0%			11%	0%	N/A	N/A				
1,001-2,500 ha	0%	0%			0%	0%	N/A	N/A				
2,501-5,000 ha	0%	0%			0%	0%	N/A	N/A				
5001-10,000 ha	0%	14%			0%	50%	N/A	N/A				
10,001-20,000 ha	0%	0%			0%	0%	N/A	N/A				
>20,000 ha	0%	0%			0%	0%	N/A	N/A				
MEA #4 - S. English R.:	37%	54%			83%	83%	N/A	N/A				
101-250 ha	32%	19%			15%	0%	N/A	N/A				
251-500 ha	4%	0%			2%	0%	N/A	N/A				
501-1,000 ha	25%	0%			0%	0%	N/A	N/A				
1,001-2,500 ha	2%	0%			0%	0%	N/A	N/A				
2,501-5,000 ha	0%	15%			0%	17%	N/A	N/A				
5001-10,000 ha	0%	11%			0%	0%	N/A	N/A				
10,001-20,000 ha	0%	0%			0%	0%	N/A	N/A				
>20,000 ha	0%	0%			0%	0%	N/A	N/A				

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4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

Indicator	LTMD	(Oct. 14 with wildfires)	Desirable Level	Target (by Plan End)	LTMD Projection				Assessment	Final Plan Assessment Compared to LTMD
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)	Long (100 yrs)		
(6a) Area of Managed Crown forest available for timber production (ha)	503,772	469,447 (due to increased reserve area)	Maintain a min. of 493,000 ha	Same as desirable level	501,468	467,649	499,437 465,702	493,468 459,869	(future assessment after plan implementation)	(Same as LTMD when reserves considered - future assessment after plan implementation)
(6b) Long-term projected available harvest area (ha) (all Forest Units combined)	4,859	3,810 (underallocated to address 2021 fires)	AHA required to balance objective achievement and operational considerations	Same as desirable level	4,337	4,125	3,953 3,811	3,686 4,060	ACHIEVED: Annual Harvest Area is projected to provide for a good balance of objective achievement in short and long-term.	Similar to LTMD. ACHIEVED. Lower Term 1 (2022-2032) harvest planned to address short term impact of 2021 wildfires (20% lower). No harvest in north/DCHS in this FMP. Long-term harvest area projections are similar between LTMD-07 and FinalTest5.

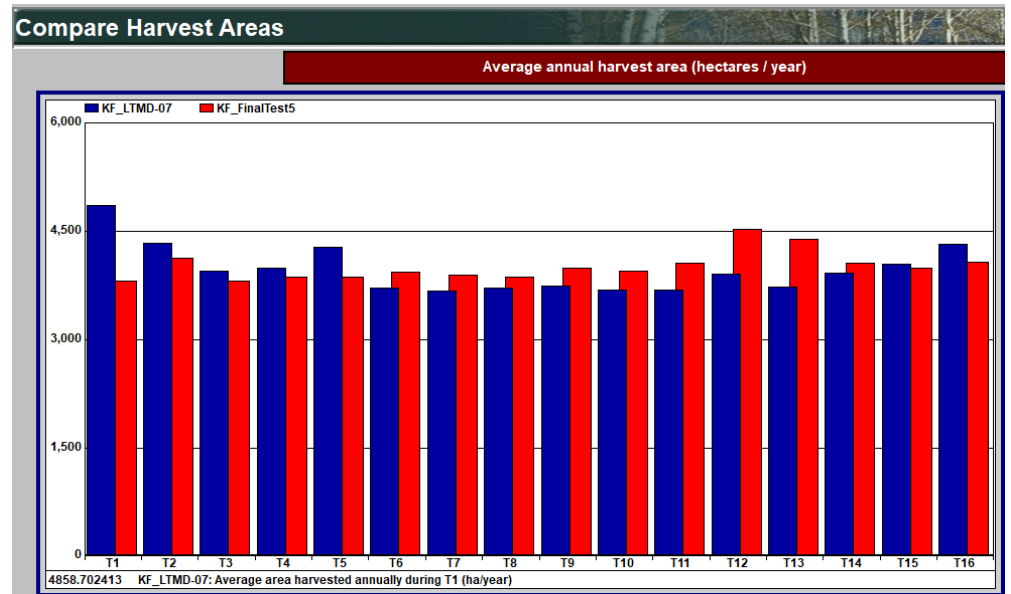
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LTMD-07

10-year Period (Start)	Available Forest:
2022	503,772
2032	501,468
2042	499,437
2052	497,575
2062	495,730
2072	494,075
2082	494,073
2092	493,997
2102	493,654
2112	493,522
2122	493,468
2132	493,468
2142	493,468
2152	493,468
2162	493,468
2172	493,468
2182	493,468
BLG Desirable Upper	n/a
BLG Desirable Lower	493,000

FinalTest5 (SFMM with revised Plan Start)

(6a) Available Forest:	
Term	
T1	469,447
T2	467,649
T3	465,702
T4	463,908
T5	462,063
T6	460,627
T7	460,493
T8	460,464
T9	460,157
T10	460,031
T11	459,869
T12	459,869
T13	459,869
T14	459,869
T15	459,869
T16	459,869
T17	459,869



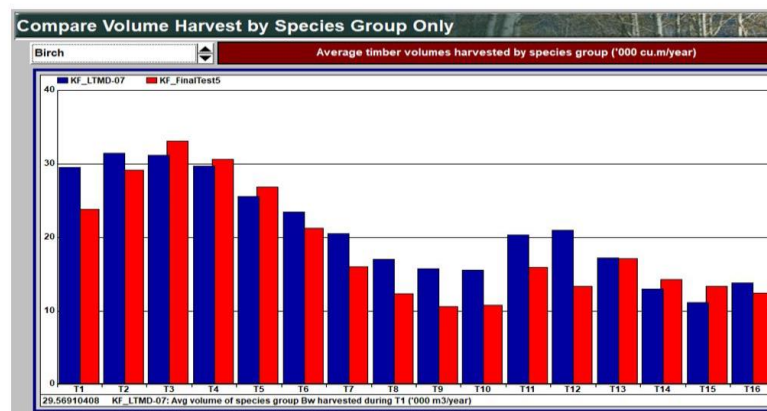
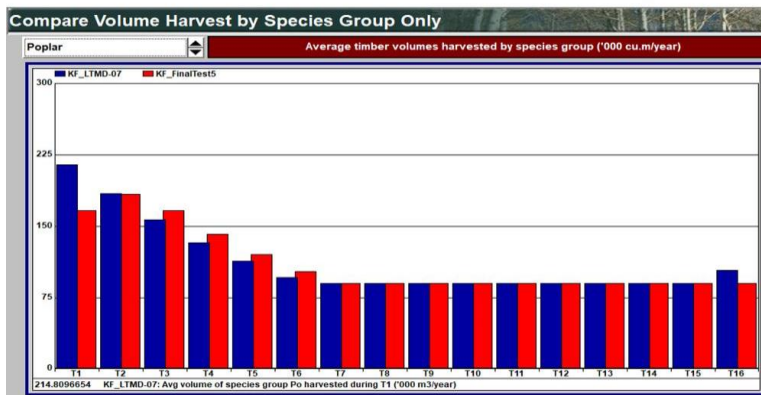
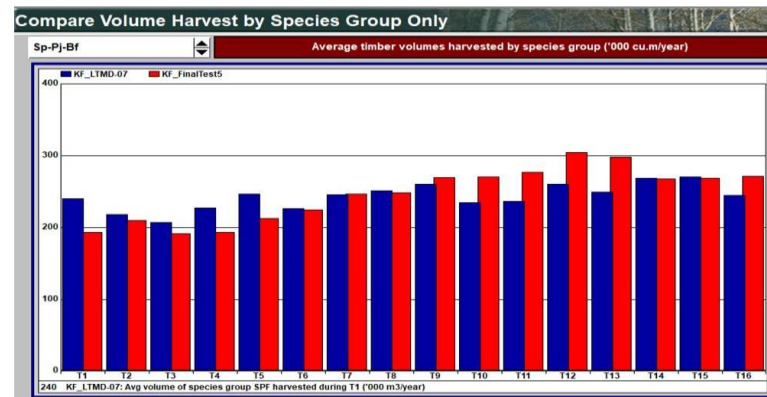
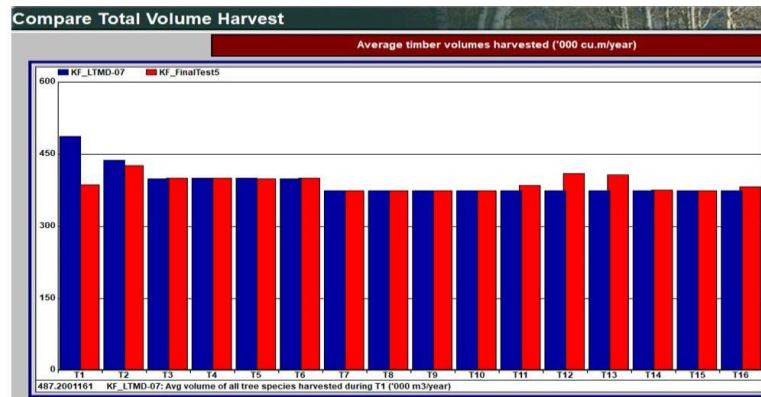
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4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD Effect of Planned Harvest on Objective Achievement

Indicator	LTMD	(Oct. 14 with wildfires)	Desirable Level	Target (by Plan End)	LTMD Projection				Assessment	Final Plan Assessment Compared to LTMD
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)	Long (100 yrs)		
(6c) Long-term projected available harvest volume by species group (m ³ / year).	Annual Harvest Vol. (1,000 m ³)		Desired Level (1,000 m ³ /yr)	Same as desirable level					ACHIEVED: Short to long-term harvest volumes meet commitments, except long-term Poplar falls below current commitment. Overall volumes are acceptable with consideration for balanced objective achievement and increase in conifer area.	Similar to LTMD overall, but lower in this plan period. ACHIEVED. Operational TOTAL volumes in FMP-13 are 8% lower than LTMD, whereas the FinalTest projected T1 being 10% lower, primarily in DCHS zone SPF.
PWR	2		2		2		2	24		
SPF	240		156		219		207	237		
PO	215		152		184		157	90		
BW	30		15		32		31	20		
TOTAL	487		325		438		400	375		



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4.0 PLANNED OPERATIONS

Comparison of Planned Operations to LTMD
Effect of Planned Harvest on Objective Achievement

Indicator	LTMD (Oct. 14 with wildfires)		Desirable Level	Target (by Plan End)	LTMD Projection			Assessment	Final Plan Assessment Compared to LTMD
	Plan Start Level	REVISED Plan Start 2022 (with fires)			Short (10 years) Plan End 2032	REVISED Plan End 2032 Final	Medium (20 yrs)		
(6d) Long-term projected available harvest volume by broad size (proportion/size).	Annual Harvest Vol. (proportion/size)		Maintain or increase proportion of "Large"	Same as desirable level				ACHIEVED: Proportion of Large size volume is projected to be maintained or increase through time.	Similar to LTMD.
	Small	95%			93%	91%	92%		
	Large	5%			7%	9%	8%		
(7a) Opportunities for involvement of Indigenous communities and Métis Nation of Ontario in plan development	100%		All (100% of 16) Indigenous communities within or adjacent to the Kenora Forest and Métis Nation of Ontario to be provided opportunities to contribute information during plan development.	Same as desired level.	N/A		N/A	ACHIEVED: All 16 Indigenous communities and Métis Nation of Ontario were contacted (100%) on multiple occasions for involvement throughout FMP development, and for input and review of the background information and values identification. Desirable and target levels were achieved.	Same as LTMD.
(8a) Local Citizens' Committee's self-evaluation of its effectiveness in plan development.	86%		LCC Effectiveness survey results indicate at least 70% effectiveness in the development of the FMP.	LCC Effectiveness survey results indicate at least 60% effectiveness in the development of the FMP	N/A		N/A	ACHIEVED: LCC survey resulted in desirable level achievement. Overall strong agreement in engagement of LCC in FMP development.	Same as LTMD.

Indicators Assessed in Future (during / after FMP implementation):

- (5a) Kilometres of road per square kilometre of Crown productive forest.
- (6e) Actual Harvest Area as Percentage of Planned, by forest unit.
- (6f) Actual Harvest Volume as Percentage of Planned, by species group.
- (9a) Percent of harvested forest area assessed as successfully established, by forest unit:
- (9b) Planned and actual percent of harvest area treated by broad treatment type:
- (9c) Planned and actual percent of area successfully regenerated to the target forest unit, by forest unit over the entire forest.
- (10a) Percent of forest operation inspections in non-compliance, by activity and remedy type.
- (11a) Compliance with management practices that prevent, minimize or mitigate site damage (% of inspections in non-compliance, by remedy type).
- (11b) Compliance with management practices that protect water quality and fish habitat (% of inspections in non-compliance, by remedy type).



4.9.7 Conclusion of the Comparison of Planned Operations to the LTMD

The comparison of projected results of planned operations to the LTMD indicate no significant negative impact on the desired future forest condition (forest composition, landscape class area, age class structure, old forest) are expected to result from the implementation of planned operations during the 2022-2032 period. For three (3) caribou habitat indicators in the caribou zone, Plan Start 2022 and Plan End 2032 achievement of desirable levels was changed from ACHIEVED in draft plan to NOT ACHIEVED. This change in assessment in this final FMP due to the burning of significant forest area in 2021 Fire KEN51, and was not a result of planned forest management activities.

At the management unit level, there is no appreciable difference in projected forest sustainability between the results of planned allocations in this plan and those projected in the Long-term Management Direction (LTMD-07). Strategically, the planned allocations are projected to contribute to objective achievement, future forest conditions, and the long-term sustainability of the Kenora Forest. Implementation of the planned harvest allocations are expected to positively impact the spatial landscape pattern of the Kenora Forest in the long-term.

**4.9.8 NDMNR Decision and Rationale for Continued Use of LTMD for 2022-2032
FMP after 2021 Wildfires**

During the preparation of the 2022-2032 FMP for the Kenora FMU, wildfires burnt a large area primarily in and adjacent to the northern portion of the Kenora Forest. This natural disturbance had an impact on the landscape and the inputs used in the development of the FMP. Given this occurrence was large and happened during the development of the FMP, additional assessment and further analysis was done by NDMNR to ensure the Long-Term Management Direction (LTMD) was achievable for the 10-year FMP.

Prior to final plan submission, NDMNR reviewed the projected impacts of final plan operations on the implementation of the LTMD through analysis with the Strategic Forest Management Model (SFMM, a non-spatial analysis tool) and Ontario's Landscape Tool (OLT, a spatial analysis tool). NDMNR also conducted an additional sensitivity analysis using SFMM.

It was noted during the sensitivity analysis that the achievement of the LTMD at Draft Plan was still possible after the wildfires because significant flexibility was built into the model, where harvest area and harvest volumes were not maximized. This flexibility has been reduced due to the fires and any near future significant disturbances could have an impact on LTMD achievement. The safety margin that was built into the model to account for natural disturbances that will occur over the terms also has been significantly reduced for the Final Plan, but still exists.

The Plan Author has adjusted harvest allocations for the final plan to mitigate the impacts of the wildfires on implementation of the LTMD (reduction by approximately 20%). Harvest allocations in the Caribou Zone were removed due to the wildfires covering most of that zone (the Caribou Zone represents about 30% of the forest). Within the Caribou Zone, the CAR grouped subunit in the LTMD model shows that 6.6% of the Term 1 Allowable Harvest Area would have come from the Caribou Zone. Overall, the Final Plan planned allocations by Miisun on the rest of the forest closely matches the Final Test by Forest Unit Allowable Harvest Area after accounting for the wildfires. In regards to the Harvest Volume, the stand level volume of the allocated harvest area is projected to be higher than the projected LTMD volume, so although harvest area overall is reduced by 20%, the volume reduction is estimated to be reduced by 12%. Based on the historic utilization of wood fiber on the Kenora Forest, the available harvest volume should be more that capable of meeting consumer demand.

1 NDMNRF has concluded that the operational adjustments made for the final Kenora
2 Forest FMP has mitigated the short-term impacts of the 2021 wildfires. Implementation
3 of the adjusted final plan operations is consistent with the strategic LTMD. The
4 comparison of planned operations to the LTMD has been well documented for the final
5 FMP (Sections 4.9.0 – 4.9.7).

6
7 **Decision:** After review and analysis, NDMNRF endorsed the continued use of the
8 LTMD (LTMD-07) for this 2022-2032 FMP for the Kenora Forest.

9



5.0 DETERMINATION OF SUSTAINABILITY

The overall determination of sustainability is based on the collective assessment of objective achievement, the spatial assessment, the social and economic assessment and the risk assessment. A favourable determination of sustainability allows for the conclusion of forest sustainability and documents how the forest management plan has regard for plant life, animal life, water, soil, air, and social and economic values, including recreational values and heritage values. A summary of the components considered during the determination of sustainability are described in the following subsections.

5.1 Assessment of Management Objective Achievement

The FMP objectives, indicators, desirable levels and targets were established to address the *Crown Forest Sustainability Act* objective categories. The Assessment of Objective Achievement is documented in Table FMP-10 for each indicator that can be assessed in the FMP through strategic modelling or operational planning (during spatial component of strategic planning). The assessment of objective achievement was based on the extent to which the established desirable levels for each indicator were satisfied within the 10-year plan period (detailed assessment in Section 3.7.3).

Of the 30 indicators of objective achievement included in Table FMP-10, 18 of the indicators can be assessed up to approval of the Forest Management Plan. The remaining 12 indicators (and reassessment of some of the original 18 indicators) will be assessed in the future after plan implementation as appropriate (specific indicator timing of assessment is noted in Table FMP-10 and in plan text Section 3.6, and details of the assessment are contained in Section 3.7.3).

Final Plan Assessment - Of the 30 plan indicators:

- 10 indicators **Achieved** desirable levels or movement towards desirable level through meeting the target level within the plan period;
- 3 indicators are **Partially Achieved** with achievement of or movement towards target levels;
- 5 indicators do **Not Achieve** desirable or target levels:
 - Indicator 1b: Texture of Caribou Winter Habitat – revised to Not Achieved
 - Indicator 1c: Texture of Caribou Refuge Habitat – revised to Not Achieved
 - Indicator 1e: On-line Caribou DCHS (%) – revised to Not Achieved
 - Indicator 2c: All Ages Red Pine and White Pine Forest Unit Area – revised to Not Achieved;
 - Indicator 3b: Young forest patch size frequency (remains as Not Achieved); and
- 12 indicators are measured in the **Future**, after plan implementation.

12
30



1 All of the plan objective indicators measured at this stage are achieving or progressing
2 towards desirable levels during this plan period (Table FMP-10), except five (5)
3 indicators as noted below:

4
5 Objective 1: Caribou Habitat

6 Indicator 1b: Texture of Caribou Winter Habitat

7 Indicator 1c: Texture of Caribou Refuge Habitat

8 Indicator 1e: On-line Caribou DCHS (%)

9 The Plan Start 2022 habitat area / pattern levels of the three (3) caribou habitat
10 indicators listed above were significantly reduced by Fire KEN51 in 2021. All
11 harvest activities and road construction previously proposed for the caribou zone in
12 this plan period were removed from the Final Plan. The revised poor achievement
13 of these indicators is beyond the control of the Forest Manager, but is projected to
14 improve in 40-60 years as burnt area ages into more suitable conditions for caribou
15 habitat (40 years) or online DCHS area (60 years).

16
17 Objective 2: Forest Composition

18 Indicator 2c: All Ages Red Pine and White Pine Forest Unit Area:

19 While the Plan Start 2022 PRW forest unit area is maintained for 40 years, it does
20 not appreciably increase through time as desired. Reduced harvest over the next
21 20 years, as a result of 2021 wildfires, limits the areas available to be converted to
22 the PRW forest unit. Actual increase in PRW may be greater than strategically
23 modelled (SFMM FinalTest5 run data) through planting for forest unit conversion
24 with the projected planting of over 850,000 red pine and white pine trees in the 10-
25 year plan period.

26
27 Objective 3: Landscape Pattern Indicator 3b - Young forest patch size:

28 The frequency of small patches of young forest are projected to increase (away
29 from mean, desirable level) on the Kenora Forest during the 10-year period.
30 Desirable and target levels are not expected to be achieved until the long-term with
31 implementation of harvest to defragment the forest and create more, larger young
32 forest over many planning periods. This deviation in objective achievement was
33 reviewed and considered acceptable by the Planning Team in the context of
34 overall objective achievement. **FINAL PLAN NOTE:** Actual achievement of young
35 forest patch size may be closer to the desirable level than projected in the final
36 FMP for Plan End 2032 after the 2021 wildfires are mapped in detail in the forest
37 inventory (rather than assuming that all areas within the fire perimeter is burnt).

5.2 Spatial Assessment

A number of preliminary spatial assessments were conducted to analyze achievement of management objectives that are influenced by the location of planned harvest areas. Documentation of these spatial analyses is included in FMP Supplementary Documentation B – Analysis Package. Brief summaries for each analysis follow:

Management Zones – Strategic management zones for emphasis of wildlife habitat management on the Kenora Forest were identified for caribou (Dynamic Caribou Habitat Schedule), moose, deer and elk. The Caribou Dynamic Habitat Schedule block timing was determined for the caribou zone, resulting in “B” blocks being available for operations 2022-2042. Operational management zones were identified for areas not already classified as strategic management zones. These operational zones were used in strategic modelling to provide spatial control to projected operations.

Harvest Areas - Preferred harvest areas for the 2022-2032 plan period adhere to the Dynamic Caribou Habitat Schedule timing for current and future caribou habitat management, consistent with inputs for SFMM strategic modelling. The spatial distribution of harvest over the first four FMP periods (i.e. for 40 years from 2022-2062) was projected in the LTMD. Operational zones with the majority of harvest were mapped and reviewed by the Planning Team. The 40-year projection of harvest was considered by the Planning Team to be generally operationally feasible and economically feasible. **FINAL PLAN NOTE: For the final FMP, all harvest areas from the DCHS were deleted** due to Fire KEN51 burning the majority of mature forest in the caribou zone.

Additional strategic and operational planning for the Kenora Forest will be conducted prior to forest management plan approvals for the future FMP periods 2032-2062.

Road access to DCHS blocks for 2022-2042 and area north of Umfreville Road (non-caribou zone) was planned for construction in this FMP period. However the Caribou Falls Road, Umfreville Road, Sydney East Road and Sydney West Road have been removed from the final FMP due to burning of eligible harvest area to be accessed by these roads (no DCHS harvest area for at least next 20 years). All other harvest areas and associated road access projected for this plan period 2022-2032 have been reviewed and are operationally feasible to implement. The 40-year harvest includes a balance of shorter and longer haul distances within each plan period to contribute to economic feasibility. All harvest blocks have been reviewed for general operational feasibility.

1
2 **Landscape Pattern** - Landscape pattern objectives include indicators for amount and
3 arrangement of caribou habitat, and maintaining or enhancing natural landscape
4 structure, composition and patterns that provide for the long-term health of forest
5 ecosystems in an efficient and effective manner. Landscape pattern objectives were
6 built on the 2012 FMP objectives, and have been refined for this FMP in accordance
7 with the *Forest Management Planning Manual* (2020) and the *Forest Management*
8 *Guide for Boreal Landscapes* (2014).

9
10 Landscape pattern objectives were assessed in the LTMD (including the arrangement of
11 caribou habitat and mature and old forest). The Planning Team relied on NDMNRF
12 Ontario's Landscape Tool (OLT) records of the simulated natural forest condition when
13 determining appropriate desirable levels for landscape pattern indicators. Landscape
14 pattern objectives for arrangement of caribou habitat (refuge and winter) and young
15 forest patch sizes were not achieved, primarily as a result of Fire KEN51 in 2021 in the
16 northern portion of the Kenora Forest. The pattern of mature on old forest throughout
17 the whole Kenora Forest was projected to be acceptable with FMP operation (Section
18 3.7.3, Objectives 1, 2 & 3, and Table FMP-10, Section 4.9.6).

19
20 **Stand Level Residual** – The *Forest Management Guide for Conserving Biodiversity at*
21 *the Stand and Site Scales* directs the amount and distribution of stand level residual.
22 Regional NDMNRF advisors aided by Miisun analyzed the amount of stand level
23 residual associated with the planned harvest for the 10-year plan period through the use
24 of an NDMNRF-developed computer spatial analysis program, Evaluate Forest
25 Residual Tool (eFRT). Wildlife trees will be left in all harvest areas as per the SSG and
26 Wabaseemoong Stewardship Agreement. Residual patches will be left only in harvest
27 areas outside of the caribou zone and Moose Emphasis Areas.

28
29 **Spatial Analyses Conclusion** – The overall spatial distribution of landscape pattern
30 (measured by Ontario's Landscape Tool) is improved in the medium to long-term
31 through implementation of the LTMD through planned harvest in this plan period. The
32 spatial distribution of projected harvest area for 40 years (2022-2062) was assessed
33 and considered to be spatially and economically feasible.

5.3 Social and Economic Assessment

The *Forest Management Planning Manual (2020)* requires that a Social and Economic Assessment (SEA) be prepared to identify the expected social and economic impacts of implementing the management strategy proposed in the Long-Term Management Direction (LTMD) for the development of this FMP. The assessment examines how the quantity of timber supplied in the wood processing facilities, and the silvicultural investment requirements for the proposed management strategy may affect the communities identified in the Social & Economic Description (Supplementary Documentation E).

A qualitative Social and Economic Assessment of timber volumes and silvicultural expenditures was completed and is based on the qualitative comparison of the annual planned harvest volume levels for the 2012 FMP and the levels shown in LTMD for the 2022-2032 FMP. The Long-Term Management Direction projects a 10% increase in total net merchantable harvest volume during this plan period as compared to the 2012-2022 FMP. The 2012-2022 FMP included 443,600 m³ per year (TOTAL all species), 240,000 Spruce-Pine-Fir. The 2022-2032 LTMD includes 428,200 m³ per year (TOTAL all species), 240,000 Spruce-Pine-Fir. With final plan reduced harvest allocations (removal of DCHS blocks and all harvest from subunit Z15), projected stand-level harvest net merchantable volumes are estimated to be 428,650 per year (Table FMP-13). This estimate is approx. 3% lower than the harvest volumes in the 2012 FMP.

The socio-economic impacts from wood utilization by the forest industry supplied by the Kenora Forest through implementation of the 2022-2032 FMP is expected to be comparable to that in the 2012-2022 FMP. The similar harvest volumes would likely provide for maintenance of direct and indirect socio-economic effects to the Province of Ontario as provided in the 2012 FMP. Stable harvest volumes generally allow for stable industry output, person years of employment and gross domestic product.

The impacts of forest management and operations on recreation and tourism are not dependent on the harvest level but rather how the specific value has been addressed. The impacts of forest management on mining and mineral exploration and baitfish operations are mainly positive. Forest operations will directly affect certain traplines and not others depending on where harvest allocations are planned (may either be positive or negative impact). Bear management area (BMA) operators may also be affected by both the harvest operations and road access. Stakeholder involvement during plan development will allow consideration for other values and users to be incorporated in the FMP to minimize potential negative impacts from forest operations.

Overall, the social and economic assessment for the plan suggests the social and/or economic benefits for the 2022-2032 FMP will be similar to those of the 2012-2022 plan.



5.4 Risk Assessment

This section of the FMP summarizes the risk to plan implementation, if certain decisions made during development of the Long-Term Management Direction do not come to pass. The following bullet points describe certain assumptions and associated potential barriers to successful implementation of the FMP Long-Term Management Direction:

Lack of markets or mill labour disputes could reduce the demand for wood from the Kenora Forest. **Low Risk:** While market fluctuations may occur, this is not influenced by the FMP Planning Team.

Failure of approval of Umfreville Road segment on Whiskey Jack Forest – The access to the northern caribou zone requires construction of the proposed Umfreville Road, which would require about 6 km out of the 72 km of proposed new road construction to be on the northern portion of the adjacent forest management unit (due to lakes and other difficult terrain considerations on the Kenora Forest). **Moderate Risk:** Failure to build the road would eliminate access to the eastern portion of the Kenora Forest DCHS area, as well as Z14, Z15 and a significant portion of MEA3 operational zones. Eliminating harvest in these areas would reduce short and long-term harvest opportunity and associated objective achievement.

FINAL PLAN NOTE: This road has been removed from the final FMP due to burning of eligible harvest area to be accessed by this road (no longer a risk in the FMP).

Failure of approval or construction of proposed new primary roads is a risk to accessing planned harvest blocks during 2022-2032 and 2032-2042 (applies to roads other than the Umfreville Road segment on the Whiskey Jack Forest). **Low Risk:** Primary roads are approved in this FMP, and planned for construction. Any delay in primary road construction would be mitigated through the reselection of approved harvest areas, accessible by existing roads or other branch roads.

FINAL PLAN NOTE: The Sydney East and Sydney West Roads have been removed from the final FMP due to burning of eligible harvest area to be accessed by these roads (reduced risk even lower than estimated at LTMD).

Harvesting on the Aulneau Peninsula – LTMD included minimal harvest on the Aulneau Peninsula 2022-2023, and continued harvest thereafter in all terms. Scoping runs were conducted to explore impact of delaying harvest for 40, 100, or 160 years. No significant impacts with 40 year deferral as operations in rest of forest compensate to still achieve objectives. Delay 100-160 years has minimal impact, but does reduce achievement for Moose browse, young forest, red pine-white pine area. **Low Risk:** to objective achievement, however more significant impacts to Aulneau landscape composition and pattern. If harvesting does not occur on the Aulneau Peninsula during



1 this 10-year plan period, the preferred harvest of approximately 2,000 ha will not be
2 reallocated elsewhere on the forest.

3

4 Failure to achieve successful forest renewal results is a risk to achieving long-term
5 forest structure and composition objectives. **Moderate Risk:** In order to achieve
6 certain Boreal Landscape Guide indicators, such as an increase in pure conifer stands,
7 there is a need to reduce mixedwood stands. Successful conversion to conifer may
8 require tending activities such as herbicide application. A loss of herbicide use as a
9 forest management tool could negatively impact success of the renewal program
10 required for projected objective achievements.

11

12 Risk Assessment Conclusion – The impacts of 2021 wildfire on implementation of the
13 LTMD were mitigated through removal from the final FMP of northern planned harvest
14 blocks and associated planned road access to these areas. Changes in the above risks
15 to FMP decisions are considered minimal or low risk to overall, successful
16 implementation of the Long-Term Management Direction through planned operations for
17 the 2022-2032 FMP.

18

5.5 Conclusion on the Sustainability of the FMP

The overall determination of sustainability is based on the collective assessment of objective achievement, the spatial assessment, the social and economic assessment and prescriptions for the protection of values.

Overall, based on the quantitative and qualitative objectives (Table FMP-10) that can be assessed during preparation of the forest management plan, there has been achievement in meeting or exceeding the desirable levels and associated targets for all but five indicators of forest condition, and goods and services (13 of 18 indicators). Four of the five indicators are affected by Plan Start 2022 forest landscape pattern and caribou habitat. Caribou habitat indicators were significantly impacted by Fire KEN51 in 2021, and cannot be improved until the fire regenerates and grows older. The fifth indicator, area of red pine – white pine may be operationally improved through planting activities, resulting in more area than strategically projected.

From a spatial perspective, the objectives related to landscape pattern at the management unit level have been achieved or movement towards achievement has been demonstrated through projected implementation of the LTMD. The FMP planned harvest area is similar but less than the projected Long-Term Management Direction harvest area. Planned harvest areas include area of concern planning for the protection of forest values.

The social and economic assessment for this 2022-2032 plan period indicates that 2012-2022 FMP levels of social or economic benefits are projected to be maintained through implementation of this FMP.

The risks of using improper assumptions for strategic planning or risks to implementation of the LTMD as planned are all Low to Moderate risk.

Overall, the assessment of objective achievement, the social and economic assessment, the Long-term Management Direction and planned forest management activities all support that the 2022-2032 Forest Management Plan for the Kenora Forest has regard for plant life, animal life, water, soil, air, social and economic values, including recreational and heritage values. As a result, it can be concluded that implementation of this FMP would provide for the sustainability of Ontario's Crown forest.

1 **6.0 DOCUMENTATION**

2 **6.1 *Supplementary Documentation***

3 Supplementary documentation is located in FMP submission file MU644_2022_FMP_
4 TXT_SuppDoc.PDF)

5
6 **A** - Historic Forest Condition

7 **B** - Analysis Package (contained in file MU644_2022_FMP_ TXT_AnPack.PDF)

8 **C** - First Nation and Métis Background Information Reports

9 **D** - Summary of First Nation and Métis Involvement

10 **E** - Social and Economic Description

11 **F** - Monitoring Program for Exceptions

12 **G** - Monitoring Program for Success of Silvicultural Activities

13 **H** - Primary Road Planning

14 **I** - Area of Concern Planning

15 **J** - Summary of Public Consultation

16 **K** - Local Citizens' Committee Report

17 **L** - List of Required Alterations

18 **M** - Planning Team's Terms of Reference

19 **N** - Statement of Environmental Values

20 **O** - DFO – NDMNRF Water Crossing Standards Protocol

21 **P** – In-water Work Timing Window Guidelines

22 **Q** – Vermilion Lake Operational Management Zone

23
24 **6.2 *Other Documentation***

25
26 The public correspondence related to the development of the FMP is retained on file at
27 the Kenora District Office of the NDMNRF. The Report on the Protection of Identified
28 First Nation and Métis Values is retained at the Kenora District Office.

29
30 **7.0 FOREST MANAGEMENT PLAN SUMMARY**

31
32 A Forest Management Plan Summary has been prepared in and is located in FMP
33 Summary Submission files:

34 MU644_2022_FMP_TXT_Sum.PDF FMP Summary Text (English)

35 MU644_2022_FMP_TXT_SumFR.PDF FMP Summary Text (French)

36 MU644_2022_FMP_MAP_Sum_00.PDF FMP Summary Map (English)

37 MU644_2022_FMP_MAP_SumFR_00.PDF FMP Summary Map (French)

38
39 The FMP Summary is also available at <https://nrip.mnr.gov.on.ca> or by contacting the
40 Kenora District Office of the NDMNRF.



1 **8.0 FOREST MANAGEMENT PLAN TABLES**

2
3 **The following is a listing of the tables required by the *Forest Management***
4 ***Planning Manual (2020)* included in this section:**

5
6 FMP Tables are located in FMP submission file
7 MU644_2022_FMP_TBL_Tables.PDF:

- 8
9 FMP-1: Management Unit Crown Land Summary
10 FMP-2: Description of Forest Units
11 FMP-3: Summary of Managed Crown Productive Forest by Forest Unit
12 FMP-4: Silvicultural Ground Rules
13 FMP-5: Post-harvest Renewal Transition Rules
14 FMP-6: Projected Forest Condition for the Crown Productive Forest
15 FMP-7: Projected Habitat for Selected Wildlife Species
16 FMP-8: Projected Available Harvest Area by Forest Unit
17 FMP-9: Projected Available Harvest Volume by Species Group and Broad Size Group
18 FMP-10: Assessment of Objective Achievement
19 FMP-11: Operational Prescriptions for Areas of Concern and Conditions on Roads,
20 Landings, and Forestry Aggregate Pits
21 FMP-12: Planned Harvest Area
22 FMP-13: Planned Harvest Volume by Species
23 FMP-14: Planned Harvest Volume and Wood Utilization
24 FMP-15: Projected Wood Utilization by Mill
25 FMP-16: Contingency Harvest Area and Volume
26 FMP-17: Planned Renewal and Tending Operations
27 FMP-18: Road Construction and Use Management
28 FMP-19: Planned Expenditures
29 FMP-20: Planned Assessment of Establishment

