Long Term Management Direction Summary

2019-2029 Forest Management Plan

French-Severn Forest (MU 360)

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1.0 Introduction

The Long Term Management Direction (LTMD) is the term used for the strategic level planning for a ten-year Forest Management Plan for Crown lands in Ontario. It provides direction for the levels of access, harvest, renewal and tending activities for the French-Severn Forest to achieve the desired forest and benefits. Five milestones or planning checkpoints were achieved during the preparation of the LTMD. They are:

1) The Planning Inventory – which in this plan is based on a new enhanced Forest Resources Inventory;
2) Current Forest Condition including categorization of all forest stands into 11 forest units as well as the categorization of large parts of the landscape as to whether they are considered deer and/or moose emphasis areas;
3) Development of the Base Model Inventory and Base Model which includes all assumptions of forest inventory, forest dynamics, yield curves and silvicultural options in an aspatial optimization computer model called the Strategic Forest Management Model (SFMM);
4) Management Objectives and Scoping Runs in which objectives of goods and services from the forest are identified and assessed; and finally,
5) The proposed LTMD is the proposed selected model investigation in which all objectives are met to the most balanced extent possible. It describes the annual harvest area, annual harvest volume, landscape level target achievements and the silvicultural program. It also includes mapping of preliminary preferred harvest areas along with optional areas. Spatial analyses occurred of these preliminary harvest areas to determine if they are consistent with spatial objectives relative to old forests, young forests and deer and moose emphasis areas.

Primary forest access roads are also identified in the LTMD.

This LTMD summary describes the extent to which objectives (table FMP-9: Assessment of Objectives Achievement) have been met and provides for a preliminary determination of sustainability.

Additionally, the following documents relevant to this comment period can be reviewed during normal office hours at the MNRF Parry Sound District office:

- Draft First Nation and Métis Background Information Report (Only if the First Nation and Métis community(s) agree);
- Summary of public comments and submissions received to date and any responses to those comments and submissions;
- A summary report of the results of the desired forest and benefits meeting;

- Environmental analysis, including use management strategies of the alternative corridors for each new primary road;
- Maps that portray past and approved areas of harvest operations for the current forest management plan and the previous 10 years
- Criteria used for the identification of areas that could reasonably be harvested during the 10-year period of the plan;
- The rationale for the preferred areas for harvest;
- Summary report of the activities of the local citizen's committee to date.

It should be recognized that the review of the preliminary LTMD is only the second step in a five-step, public consultation process for the plan. Next steps will include review of operational aspects of forest management planning including refined harvest allocations, areas selected for silviculture, branch road planning and how forest values are protected in forest management.

2.0 Desired Forest and Benefits Meeting

The French-Severn Planning Team and the Local Citizens' Committee (LCC) held a Desired Forest and Benefits meeting for all members plus additional invitees. Desired forest and benefits refers to 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 long-term management direction for the management unit is developed to achieve the desired forest and benefits (OMNRF. March 2017. Forest Management Planning Manual). Break-out sessions were held to review the 2009-2019 French-Severn forest management plan (FMP) and to discuss changes based on social, economic and environmental objectives. Plan objectives, including appropriate indicators and desirable levels and targets, were discussed at other planning team and LCC meetings. Desirable level refers to the measurable amount for an indicator, expressed as a specific number, a range or a trend, used in the assessment of sustainability (OMNRF. March 2017. Forest Management Planning Manual). This information was later shared with the LCC.

3.0 Plan Objectives, Indicators and Desirable Levels

The list of desirable forest and benefits, past management plans for the French-Severn Forest and MNRF sources of direction (including Figure A-3 from the Forest Management Planning Manual for Ontario's Crown Forests (2009) and forest management guides were used to develop plan objectives, indicators of objective achievement, desirable levels and target levels for the 2019-2029 French-Severn FMP.

The 2019-2029 FMP is being written under direction of the Forest Management Guide for the Great Lakes and St. Lawrence Landscapes (MNRF 2010) (Landscape Guide). A fundamental basis of this guide is that it is desirable that the FMP project forest management activities that will create a future forest landscape with a composition and structure that is similar to those created by natural processes. For a variety of landscape class and forest development stage indicators, the targets are provided by documentation associated with this guide that are specific to this forest – specifically a Simulated Range of Natural Variation (SRNV). It is expected that values for these indicators over time would move towards and ideally to within the SRNV from the proposed LTMD and if this is not accomplished rationale provided.

Other environmental type objectives for this plan include maintaining red oak on the landbase since oak acorns may take on more importance as the supply of beechnuts will be reduced due to beech trees dying from beech bark disease.

The Current Industrial Demand for wood supply was provided by the Provincial Wood Supply Report and objectives for wood by species group were benchmarked from those values.

There are a number of spatial objectives identified for mature and old forest, young forest and deer and moose emphasis areas. The Ontario Landscape Tool was used to assess movement towards targets associated with those indicators.

These indicators above are assessed at this stage of the plan development. The spatial objectives are assessed again for any changes to planned harvest areas during operational planning for the final determination of sustainability. The indicators that follow reflect objectives that are assessed during and/or after plan implementation.

There are many objectives to protect a variety of social, cultural and environmental values. Most of these are addressed through government policy such as rules on how values must be protected. This plan has indicators and targets that reflect a high degree of compliance with those rules.

There are also objectives related to carrying out silvicultural activities to increase the amount of yellow birch and black cherry on the landscape.

The objectives also recognize the importance of opportunities for participation in the process by First Nation and Métis communities and individuals. In addition, a highly effective Local Citizens' Committee is an objective.

Objectives also reflect consideration of climate change. At this stage there is not empirical information to support base model changes; however, many efforts to address

climate change will be at an operational level. An objective from the previous plan to maintain hemlock forest levels was not carried forward as hemlock is predicted to be poorly adapted to climate change. Alternatively, an objective to maintain oak forest was carried forward as oak is predicted to be more adapted to climate change. Additionally, an objective has been introduced to install an assisted migration trial which may help to inform future decisions regarding seed sourcing for white pine in a changing climate. MNRF's approach for adapting to climate change is managing forests for resilience. A healthy, resilient forest is better able to adapt to climate change. The LTMD follows MNRF's approved forest management guides. These guides help conserve biological diversity and provide for the long-term health and vigor of Crown forests to help reduce vulnerability of forests, and forest dependent communities, to climate change. Fire may be more of an issue due to climate change; however, fire is currently a very small issue in the French-Severn forest. The forest has high road coverage, including highways and municipal roads, which help to prevent the spread of fire. The French-Severn forest is highly populated which also tends to result in earlier detection of fires. Additionally, forest management planning can be responsive to the changing climate. As more information becomes available, the planning process is adaptive and can incorporate that information through regular plan renewal, mid-plan checks, plan amendments, or through periodic reviews of progress.

Management objectives, indicators and the timing of assessment are presented in table FMP-9: Assessment of Objectives Achievement (see Appendix A: Forest Management Plan Tables).

4.0 Proposed Long Term Management Direction (LTMD)

The LTMD outlines the long-term objectives for the French-Severn Forest and the forest operations that will be completed over the 10-year plan term to achieve those objectives. The long-term management direction is proposed after testing different management options. The Strategic Forest Management Model was used as the primary computer analysis tool for developing the proposed LTMD. This computer model projects how the forest develops over time, in terms of its structure and composition in response to different types of forest management activities including harvest, silviculture and fire suppression. This plan presents projections for a 100-year period. The proposed LTMD was arrived at by balancing the objectives described in Section 3.0. FMP-9 documents all the objectives, indicators and timing of the assessment. The planning team performed several SFMM-based scoping investigations to identify the ability to meet specific objectives without the constraints of other objectives. By identifying what is and is not possible without constraints provides a benchmark for a proposed Long Term Management Direction that must provide a

balanced approach for objectives. For example, if a target cannot be met when the investigation does not have to consider other objectives, it certainly cannot be met when other objectives are considered.

The proposed LTMD was arrived at by balancing a number of objectives and analyzing several SFMM-based scoping investigations to understand what the forested landbase is capable of achieving under a variety of constraints. These scoping investigations were particularly important for understanding why a number of landscape guide indicator desirable levels and targets could not be met by the proposed LTMD. The proposed LTMD does not always move towards the desired future forest condition in each (or any) of the short, medium and long-term timeframes as defined in FMP-9, and there are occasions when the amount of forest in each indicator does not fall within the SRNV. However, when all scoping investigations project forest conditions over time in a similar manner, including a scoping investigation in which the main focus was to meet each of the landscape guide indicators, it demonstrates that some of the objectives simply cannot be achieved within the 100-year timeframe of the projection. As further justification for the proposed LTMD, an optional scoping investigation was carried out that reflected the Emulation of Natural Disturbance scenario in which no harvesting occurs but stand replacing disturbances are assumed to occur without the influence of any suppression activities. That scoping investigation also projected very similar trends and levels for the majority of indicators.

There are a few reasons for how all investigations followed a similar trajectory for most landscape indicators and why all investigations, including the proposed LTMD fell short on meeting some of the associated targets.

First, this forest is dominated by forest types in which partial harvest systems are prevalent. Modelling results tend to be more consistent between investigations for these partial harvest systems. Partial harvest systems are ecologically appropriate for these forest types but significantly limit the amount of change that can be achieved through forest management.

Second, natural succession is the only disturbance agent on Crown forest lands that are not available for forest management and those model rules often do not return a forest to landscape classes such as intolerant hardwoods, nor do they result in very young forests being created. This forest has a large portion of the Crown forest classified as not available for forest management since it is in parks and protected areas, or is classified as management reserve since operability and access are so challenging that they are operationally unlikely to ever be managed. Overall, only 66% of the Crown forest within the French-Severn Forest is available for management with only 40-51% in some dominant forest units such as intolerant hardwoods, spruce-fir, white pine 2-cut

shelterwood and red oak eligible for management. In the case of jack pine forest types, only 13% of these stands are available for forest management. Therefore, the model is very limited in the scope of possible future forest conditions and results when so much area cannot be influenced by forest management.

The third consideration is the imbalance of the current age class structure. The latest forest inventory identifies most forest units as having very little young and immature forest, a large amount of mature forest and little old growth forest. This means that in the short and medium-term there is a lot of area to move into the old age classes and less area to replace that area in the mature age classes.

Figure 1 below shows the age class structure of mixedwood clearcut forest unit (MWCC). The trend shown in the graph is quite representative of most forest units. Note that most area is between 65 and 105 years old with very little area less than 55 years old. Therefore, there is limited area that can become new mature forest in the next 50 years while the amount of forest that becomes old forest will increase.

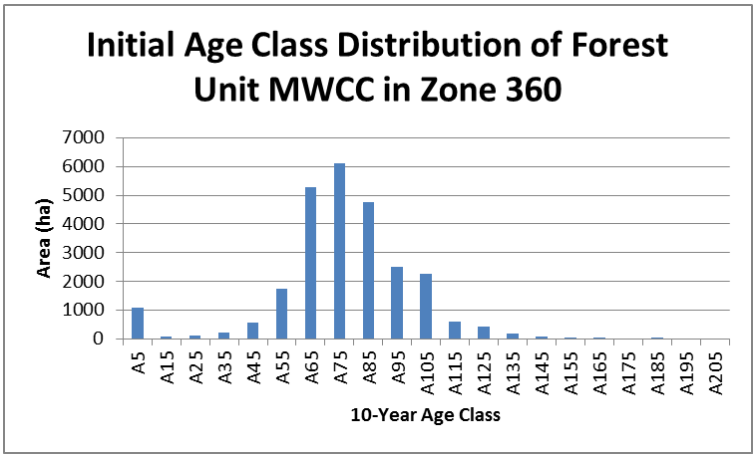

Figure 1. Initial Age Class Distribution of Forest Unit MWCC in Zone 360.

Therefore, there are a number of milestones and targets that are not met by the proposed LTMD, because they are constrained by the current forest condition, particularly age class imbalance.

Volume and harvest area targets are met with respect to Current Industrial Demand. A new inventory has classified slightly more managed available forest than in 2009, and the yield tables for certain forest units have resulted in an increase in net merchantable harvest volumes and subsequent harvest yields per hectare. Combining the effects of the inventory and yield updates, we see an increase in available harvest area and volume, particularly for the white/red pine forest. Furthermore, the proposed LTMD provides for a fairly even flow of wood, especially for the two most significant species

groups (tolerant hardwoods and white/red pine) upon which local harvesters and mills rely. At the management unit level, these two species groups were not allowed to decrease by more than 2% between any two terms. Tables FMP-7 (Available Harvest Area) and FMP-8 (Available Harvest Volume) are included in the Appendices.

The proposed LTMD also successfully reflects the desired future forest condition of maintaining the amount of oak on the landbase. An objective in table FMP-9 identifies a target of no more than a 2% decrease in the oak dominated forest unit Red Oak Shelterwood (ORUS2) in the available forest over the projected 100-year planning horizon.

The graphs below show the projected harvested wood volume over the next 100 years for all species groups combined followed by similar graphs showing just the white/red pine species group and then the tolerant hardwood species group. Note that some reduction in volume over time is an expected occurrence with 1) a small amount of forest area being potentially lost to roads and landings, 2) some forest areas being not available for forest management due to accumulating reserves for wildlife and riparian zone protection, and 3) the previously discussed fact that there is a current lack of young forest in most forest units which presents challenges in regulating the amount of area within operable age classes over time for harvest scheduling by the SFMM model .

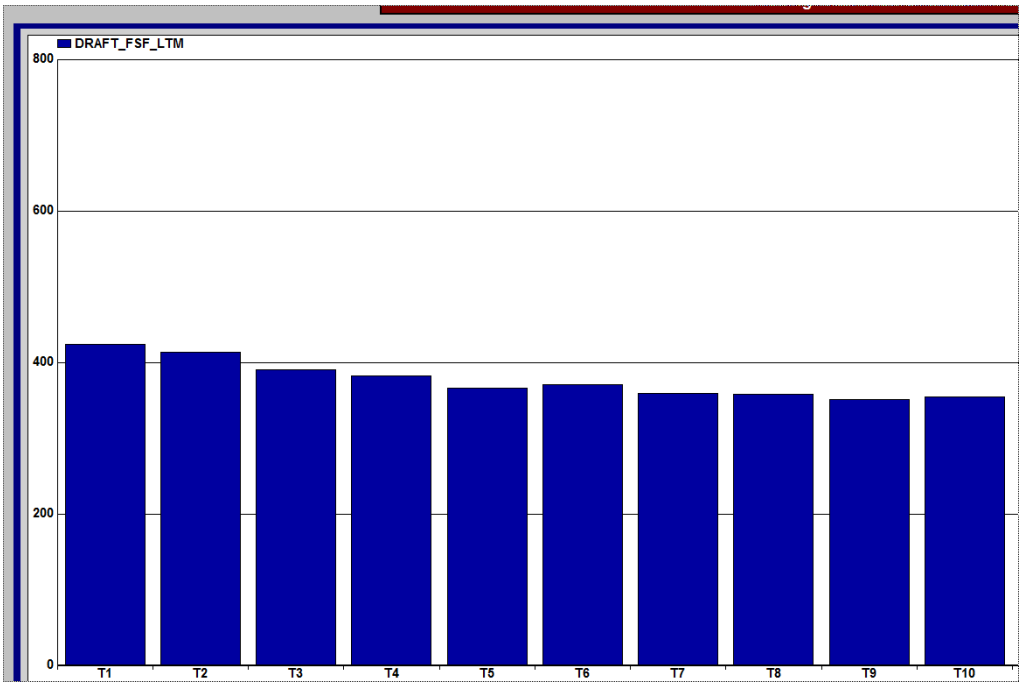

Figure 2. The total amount of projected available annual volume in cubic metres (m3) x1000 for the next ten 10-year planning terms.

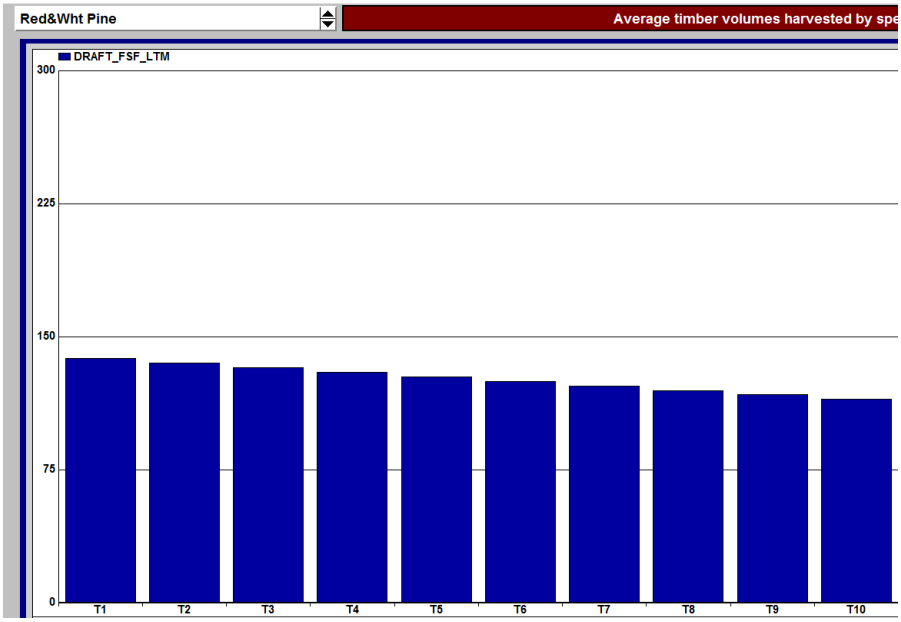

Figure 3. The total amount of projected available annual volume in m3x1000 of white and red pine for the next ten 10-year planning terms.

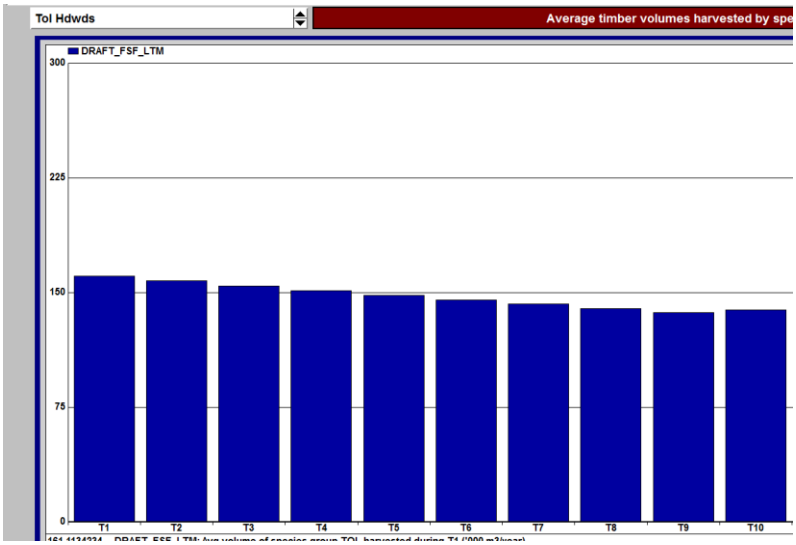

Figure 4. The total amount of projected available annual volume in m3x1000 of tolerant hardwoods for the next ten 10-year planning terms.

The outputs of the SFMM model relative to the proposed LTMD include:

1) Projected available harvest area by forest unit (Table FMP-7);
2) Projected harvest volume by species group (Table FMP-8); and,
3) Assessment of objective achievement (Table FMP-9).

The proposed LTMD was presented to and reviewed by the planning team and the LCC. A joint planning team/LCC meeting was held and there was support for the proposed LTMD. The preliminary preferred and optional harvest maps were also available for inspection and comment.

4.1 Selection of Preferred and Optional Harvest Areas

The areas selected as preferred and optional harvest areas are included in the summary map but also available, at request, on larger scale maps. Planned allocations by forest unit will be refined during the detailed planning of forest operations for the ten-year. This information will be available at the next Public Consultation: Stage Three-Review of Proposed Operations. At this stage the planning team will send out notices inviting the public to attend two information centres. The plan author, members of the planning team, and a representative from the local citizens' committee will be at the information centre to answer questions. Harvest eligibility rules identify which stands are old enough for harvest and, in the case of partial cut forest units, stands that have had not been harvested for at least a given period of time. The preferred harvest areas identified were selected up to a level close to the available harvest area from the proposed LTMD for each forest unit. Some areas in excess of the proposed LTMD available harvest area are identified because during operational planning, which is the next stage in plan development, area of concern prescriptions will be applied and reduce the area mapped.

This FMP includes two operational management zones – a "normal zone" identified as "SU360" in Base Model documentation and a "challenging zone" wherein the likely combination of access, geographical or other operational considerations will make these areas more challenging to operate. This zone is identified as "GEOG" in Base Model documentation.

In addition to allocation eligibility and available harvest area by management zone, the principles used in selecting which specific areas to identify as preliminary preferred include:

1) Selected areas are distributed through a significant portion of the forest and not just focus on a few sections;
2) Consideration is given to not only the available harvest area by forest unit but also the recommended proportion of that area by stage of management and/or age class;
3) Areas are selected with consideration to accessibility of the entire harvest block;
4) Areas selected for normally difficult to utilize forest types – often clearcut areas – are allocated in large enough areas or in conjunction with tolerant

hardwoods or white pine areas to make them more viable and to provide opportunity for early season or wet season operations when partial cutting operations are shut down;

5) Consideration given to the need to meet spatial indicators providing for a range of disturbance sizes to create and/or maintain a range of sizes of young and old forest patterns on the landscape keeping in mind recent historical disturbance sizes; and,
6) Providing opportunities for local First Nation community access to fuelwood.

A total of 88,201 ha have been identified as preliminary preferred harvest allocations with 12,208 ha being in the “challenging” management zone and the remaining 76,013 ha in the normal management zone.

The preferred areas for harvest for the 10-year period have been portrayed on a summary map (Appendix C). The summary map also includes optional harvest areas during the ten-year plan period. Planned allocations by forest unit will be refined prior to Public Consultation Stage Three – Information Centre: Review of Proposed Operations, after reserves associated with the Area of Concern planning has occurred. Some optional areas may be added and some preferred areas may be dropped as operational planning moves forward.

4.2 Available Harvest Volume

The projected Available Harvest Area of 89,541 ha (including thinning) over the 10-year period of the plan as determined by the proposed LTMD is projected to yield an available harvest volume of 4,253,720m3. Included in this total volume are:

- 367,569 m3 of spruce-pine-fir
- 540,450 m3 of intolerant hardwoods
- 1,382,792 m3 of white and red pine
- 1,611,134 m3 of tolerant hardwoods and
- 351,771 m3 of other conifers.

This information is presented in the Appendices in Table FMP-8 for each 20-year period. Note that these volumes do not include projected undersize and defect volumes that are presented in FMP-8.

5.0 Preliminary Determination of Sustainability

The overall determination of sustainability is based on the collective and balanced assessment of objective achievement, the results of the spatial assessment, the social

and economic assessment and the implications of primary road planning. Prescriptions for the protection of forest values and the forest environment are also important factors of sustainability but this occurs at the next stage of plan development.

The assessment of the objective achievement was based on the extent to which the established desirable levels for each indicator were satisfied in short, medium and long-term. Rationale has been provided for levels that are not consistent with desirable levels. A favorable determination of sustainability allows for the conclusion how the forest management plan has regard for plant life, animal life, water, soil, air and social and economic values including recreational, tourism and cultural values. A summary of the components considered during the preliminary determination of sustainability are described in the table below and the following subsections.

5.1 Assessment of Management Objective Achievement

There are a gross total of 144 indicators assessed in this plan, 67 of which are assessed at the LTMD stage of plan development with most others being assessed during plan implementation (Table 1). Although this is a high number it represents all indicators for broader objectives. For instance, there are three indicators (browse, mature conifer and hardwood/mixedwood) for each of the five Moose Emphasis Areas (MEA), so MEAs include 15 indicators.

There are a total of 33 spatial indicators including 15 MEA, 2 Deer Emphasis Area indicators, 10 old forest patch indicators, and 6 young patch indicators. Those will be discussed in section 5.2 Preliminary Spatial Assessment below.

Objective Indicators	Desirable levels to meet	Desirable levels met	Achievement	Target to meet	Targets met	Achievement	Comment
Non-Spatial Projections for the proposed LTMD							
Landscape classess	6	3	50%	18	13	72%	
Red and White pine forest	2	1	50%	6	3	50%	Note: the new inventory is showing a Plan start level that is substantially above the SRNV; this combined with traditional white pine restoration Silviculture strategy slightly increases the red and white levels quite constant over time instead of decrease
Young forest	2	1	50%	6	5	83%	
Old growth	9	3	33%	27	19	70%	Note: the new inventory is showing a Plan start level that is substantially different than the SRNV as result although many Forest units are moving in the right direction they can't achieve the DL. Four out of 6 indicators have old growth areas in excess of SRNV (SFCC, ORSU2, MWCC, and PJCC)
Red oak forest	1	1	100%	3	3	100%	
Available Harvest Volume	5	4	80%	15	15	100%	
Even Available Harvest Volume	2	2	100%	6	6	100%	PWR and Tol Hwds 2% variation
Available Harvest Area	7	5	71%	21	19	90%	INTCC and PWUS3 long term <22 ha short
Total	**34**	**20**	**59%**	**102**	**83**	**81%**	

Objective Indicators	Desirable levels to meet	Desirable levels met	Achievement	Target to meet	Targets met	Achievement	Comment
Spatial Projections for the proposed LTMD							
Young forest patch distribution	6	4	67%	6	4	67%	-1.3% for 1-100 ha, +2.4% for 101-250 ha
Mature and Old Forest Texture	10	2	20%	10	9	90%	Note: DLs cannot be achieved due to the current condition of the forest, but the vast majority of the indicators move in the right direction
Moose habitat indicators	15	11	73%	15	13	87%	Note: DLs cannot be achieved due to the current condition of the forest, but the vast majority of the indicators move in the right direction
Deer Habitat indicators (CTC)	2	2	100%	2	2	100%	CTC target now 10-30%. Shawaga and Healey Lake DEAs. Other DEAs not enough Crown land in Stratum I.
Total	**33**	**19**	**58%**	**33**	**28**	**85%**	

Table 1: Summary of objective achievement for the proposed Long-term Management Direction

There are a total of 111 non-spatial indicators, 34 of which are being assessed at LTMD. A summary of objective achievement can be found in Table 1 above.

Of the 6 landscape class indicators, there was positive movement towards the SRNV in at least one or more of short, medium and long term results. As described elsewhere, scoping analyses could not achieve a different result.

Of the two young forest landscapes, appropriate movement is made towards the SRNV although the SRNV was not always achieved in all terms.

Of the 9 even-aged forests, in terms of the amount of Old Growth Forest, there is positive movement towards the SRNV and/or it falls within the SRNV for at least some of the short, medium or long term results for all 9 indicators.

The amount of white and red pine did not move towards or fall within the SRNV for the proposed LTMD nor any scoping investigation. The level starts above the SRNV and rises somewhat for all investigations. This same increase of pine achieves a positive result for the indicator that compares current pine levels to 1995 levels from MNRF policy that seeks to increase the amount of pine on the land base.

All 5 wood supply targets were met for the short, medium and long term for all species groups. Volume of each species group also exceeds desirable level at each term except for Tolerant Hardwoods in the long term. Both species met even wood supply targets and desirable levels for the short, medium, and long term.

Available harvest area targets were met for the 7 indicators for the short, medium and long term with the exception of intolerant hardwoods and white pine 3-cut shelterwood. The level of available harvest area for these two forest units falls below the target level in the long term. The long term result for intolerant hardwoods reflects the current age class distribution for this forest type; that is, the current age class distribution is skewed towards the older age classes, with natural succession rules not resulting in the creation of intolerant hardwoods. In terms of white pine 3-cut shelterwood, it should be noted that the corresponding volume of white and red pine still greatly exceeds volume targets because of a new inventory and new forest unit classifications that differ from the inventory and classifications used in the 2009 FMP from which the available area targets were benchmarked. The decrease in PWUS3 available harvest area is offset by the increase in PWUS2 available harvest area in the long term.

As indicated in Section 3 of this document, there are a number of indicators that will be assessed later in plan development and plan implementation.

5.2 Preliminary Spatial Assessment

Management objectives and indicators affected by the location of harvest areas are assessed for achievement of spatial objectives following identification of preferred harvest areas. During the development of the FMP, these spatial assessments are performed during the development of the proposed LTMD and upon the completion of operational planning. The objective is to examine the impacts of the proposed/selected harvest operations on the spatial objectives. The spatial objectives assessed in this plan are:

- Texture of the Mature and Old Forest
- Young Forest Patch Size Distribution
- Moose Emphasis Area General Habitat
- Deeryard Critical Thermal Cover

Texture of the Mature and Old Forest

The mature and old forest texture is a pattern –based indicator used to characterize landscape distribution and pattern. This objective is satisfied by moving closer to the mature and old forest matrix as defined in the Landscape Guide science package. This indicator is measured at two different scales (50 and 500 ha hexagons in the GL-SL South region). A histogram is generated to represent the relative amount of mature and old forest in each hexagon. The landscape matrix of mature and older forest, at both scales, for most the French-Severn forest shows an older forest, e.g., over 70% of the hexagons have more than 80% mature and old forest. The proposed LTMD shows movement toward the SRNV (mean) for both assessment scales, by increasing the proportion of hexagons with <= 80% mature and old and slightly decreasing the proportion of hexagons with more than 80% mature and old forest.

Young Forest Patch Size Distribution

Young forest is classified as any stand under 36 year of age. Young forest patch distribution is represented in the Landscape Guide by proportions in a range of size classes. For example, a value of 17% in the 101-250 ha size class mean that 17% of young patches in French-Severn forest are between 101 and 250 ha in size. The desirable level is to move towards the SRNV meanof all patch size classes during the plan period. The preferred harvest allocations have moved towards the mean for 3 of the 5 size class ranges that are applicable to this forest. There is negligible movement in the smallest size class range, and the size class range that is representative of the bulk of harvest blocks and typical cut patterns moves away from the SRNV mean. There is an opportunity during operational planning to adjust a numbers of blocks in this size class to smaller size classes with AOC planning or re-distribution of preferred harvest areas.

Moose Emphasis Area General Habitat

There are five Moose emphasis areas delineated in the French-Severn Forest: East Burpee- Burton, Blair-McConkey, Ferrie-Lount, Monteith-Christie and Butt-McCraney.

The objective is to maintain the general habitat features preferred by moose in these MEAs within the following ranges:

- Browse forest: 5-30%
- Mature conifer: 15-35%
- Mixedwood and hardwoods: 20-55%

The individual assessment of the MEAs shows that for the proposed LTMD, the three indicators generally stay within or move towards the threshold range identified in the Stand and Site Guide. The exception is the Butt-McCraney MEA, where two indicators are moving further away, the browse young forest increasing from 18.5% at plan start to 41.2% at plan end, and the mature conifer decreasing from 13.7% to 11.3 %. The forests in the GL-SL Southern Region are challenged to generate levels of very young or browse producing forest since clearcut harvesting is limited in extent. In this case, the browse is generated by shelterwood and selection harvests in the hardwood dominated forests of the Butt-McCraney MEA. It is not felt that browse levels above the threshold are problematic as most times it will be from the creation of complex canopy stand structures with a residual mature canopy cover. The drop in mature-conifer dominated stands may be ameliorated during AOC planning in conifer dominated riparian areas and efforts to identify possible harvest area changes where harvest allocations coincide with stands classified as mature conifer by OLT.

Deeryard Critical Thermal Cover

There are two Deer Emphasis Areas on the French-Severn Forest that are mapped and provide Stratum 1 core area that is primarily located on Crown managed lands. The Shawanaga DEA is the largest of its kind in the management unit is located in the central western portion of the management unit while the Healey Lake DEA is located towards the southwestern portion of the management unit. The Stand and Site Guide suggests that 10-30% of the Stratum 1 areas be maintained as providing critical thermal cover. The spatial analysis indicates that both deer yards exceed the 10% level both before and after the 10-years of harvest allocations are projected.

5.3 Social and Economic Assessment

A social and economic assessment was done using a qualitative analysis based on data from the social and economic description.

Timber Value Impact Assessment

The proposed strategy predicts a 24% increase in overall volumes for Term 1 from the previous plan (2009-2019) for this forest. For example, the harvest areas increased by 11% from 8044 ha (2009-2019 Term 1) to 8954 ha (commercial tending included). There is also a corresponding increase in harvest volume from 342,000m3/yr in the 2009-2019 plan to 425,000 m3/yr.

The most significant increase was in white/red pine while there was a reduction in tolerant hardwood volume. The changes can be attributed to 1) a new eFRI that identified significantly more white/red pine forest area than in previous inventories, 2) the utilization of new empirical yield tables, and 3) differences in non-timber targets as identified in the Landscape Guide as previously described but with white and red pine no longer being a constraining target given the different targets but more so the increase in pine area.

These increases are more than adequate to meet annual Current Industrial Demand in the forest: The implementation of the proposed management strategy should maintain the current plan's level of employment and employment income from the wood processing facilities.

Commercial Forestry

This is a diverse forest and is reflected in the species and products that come from it. It seems when the market for softwood is good, the market for hardwood is poor, and when the pulp market is good, the saw log market is poor. Even within the species groupings some species are more marketable from others dependant on market demand. Industry seems to have adapted to these trends and operate in this forest as required.

The socio-economic impact of the proposed LTMD on Parry Sound District is positive even though Parry Sound District is not highly dependent on logging. The associated jobs are generally non-seasonal and better paying than many of the tourism-based industry employment opportunities.

There are no negative socio-economic impacts in communities benefiting from the silviculture program on the French-Severn Forest. The main silvicultural program which benefits local employment is tree marking. Tree marking is directly related to the available harvest area. However, the available harvest area is still much higher than what is typically utilized.

Silvicultural activities should not change significantly from past years through the course of this plan, especially with the proposed LTMD suggesting more intensive silviculture for some of the clearcut forest units, especially White Pine Seed-tree (PWST).

Recreation and tourism are key values derived from any large forest but in particular the French-Severn Forest that is so close to large urban areas of southern Ontario and the northeastern US. Since 87% of the planned harvest area is in a partial cut system – shelterwood or selection – the aesthetic values upon which recreation and tourism rely are greatly maintained. Clearcuts, when they occur, tend to be quite small and given their distribution and size, can be beneficial in terms of improving habitat for game animals. Although tourism and recreation are major industries in this forest, a high percentage are focussed on large inland lakes such as the Muskoka Lakes, Lake of Bays, Lake Bernard and of course Georgian Bay. Those areas are primarily comprised of patent land or land use zoning allows few Crown land harvesting opportunities. Consequently, Crown land forestry operations have little to no impact on a large portion of the recreation and tourism landbase.

There is already an extensive road network on Crown land that is periodically maintained as partial cuts are re-visited for next harvest entries. As such, the amount of new access is minor. Furthermore, there are zones within the forest identified in higher order land use planning that restricts the amount of public access. So any benefits or detriments from improved access from forestry activities are also greatly mitigated due to this situation.

Recreation and tourism activities may be impacted by aesthetics, from noise and visual impacts of forestry activities. Area of concern value protection reduces the impacts of these factors, as does the fact that a large percentage of forestry activities occur outside the high use timeframes. Historically, forest industry and MNRF have been able to accommodate other forest users when some conflict of interests arise – for example, not working on weekends.

5.4 Risk Assessment

There are risks that the achievement or level of achievement of the proposed LTMD will not be realized thereby affecting the future forest condition and benefits from the forest. Some risks may have an impact on the actual social, economic and/or environmental values while others may simply be in line with the actual state of these values.

The most significant and likely risk is that the full available harvest area and volume will not be realized. In past plans the level of utilization has been quite low, especially for some forest types and species groups. This is largely reflective of market conditions and available access into harvest areas. This is an example that the lack of cutting may

not be a detriment to economic values in as much as it is the markets that are affecting these conditions. If weather patterns, policy restrictions (e.g. species at risk restrictions) and access restrictions result in lower utilization of marketable and otherwise operational feasible harvest areas, then there is a social and economic opportunity that is not being realized.

The forest industry has been operating in an uncertain climate for a decade now. There have not been the large mill closures that were common in other parts of the province but both mills and logging companies continue to operate at narrow margins.

When available harvest areas are not being utilized, less forest disturbance results. Such a decrease in forest disturbance, while being favorable to objectives that rely on mature and old forest, is unfavorable to objectives that rely on the creation of young forest or forest types that require forest disturbance such as jack pine and intolerant hardwoods.

Unplanned forest disturbances are common in Ontario, mainly in the form of forest fire. Forest types in the French-Severn Forest are not very prone to stand replacing fires. There are many people in the forest and, as such, fires are reported fairly early. The well-roaded nature of the forest also allows for easy access and a rapid response by fire crews. For these reasons, fire threat is minimal. Wind damage is a very unpredictable disturbance force and some significant wind events are likely, but in recent decades large scale wind events have not occurred.

Forest pests are a concern, especially with the continued threat of invasive species. This plan has taken into account the devastating impacts of beech bark disease but other pests, such as the Hemlock woolly adelgid (HWA), are an ever-present an ongoing risk. The extent to which these pests present a risk to the plan is partially determined by the frequency of the host species. For instance, hemlock is very common so HWA would have a devastating effect. Although the emerald ash borer (EAB) is a devastating pest of ash trees, the amount of ash in this forest is relatively minor so the risk to the plan would be less.

Climate change is a topic of significant discussion at the planning team and LCC meetings. It is expected that the short term risk is fairly small but uncertainties around climate change will result in long term uncertainty. However, future plans will be developed that will be able to better address climate change as our information on this situation evolves.

Social pressures are an ever-present challenge in a forest that has so many people living and recreating in it. Some groups are concerned that forestry may contribute to issues of phosphorous and calcium levels in soil and water. Some groups and

individuals continue to be concerned about the use of herbicides in forestry. Forest managers rely on this important silvicultural tool in implementing successful silvicultural programs that help achieve the desired future forest condition.

While these risks seem significant, such risks are omnipresent and the proposed LTMD represents an appropriate path for delivering on forest sustainability at the strategic level.

5.5 Conclusion

Based on a balance of quantitative and qualitative objectives (Table FMP-9) that can be evaluated during preparation of the LTMD, there has been achievement in meeting or exceeding the desirable levels and associated targets for the majority of indicators (forest condition, and good and services). All targets are met for volume achievement and an even wood supply for the main species groups are consistent with community stability objectives. Red oak is maintained at desirable levels in the available forest consistent with input from the Desired Forest Benefits meeting.

While a number of landscape guide indicators failed to move towards and/or stay within the SRNV, there was really no ability for any LTMD to do so. Almost all of these indicators that could not be met in a managed forest investigation could not be met by investigations using the emulation of natural disturbance. Therefore, the proposed LTMD is considered to adequately meet the landscape guide objectives as best as could be achieved.

Spatial assessments showed positive movements towards desirable levels for the vast majority of indicators. During operational planning, some changes may occur to the harvest allocations along with value protection planning to result in a more favorable outcome for those few indicators.

The social and economic assessment for this proposed LTMD is positive as it has resulted in an increase in harvest volume, harvest area and associated silvicultural activities. Recreation and tourism values are largely isolated from this higher harvest level opportunity because of the location of Crown forest that is the center of most of the forestry activities.

Overall, the assessment of objective achievement, the social and economic assessment and the proposed LTMD provides for the sustainability of the French-Severn Forest.

6.0 Primary Road Corridors

The French-Severn Forest is well-roaded with both existing forestry roads as well as municipal and provincial roads. With over 50% of the landbase being in patent land, there is an extensive system of non-Crown land roads that serve as access arteries into many areas. Primary roads have been used and re-used for a number of plans given the dependence on partial cutting which has forest industries returning to the same harvest blocks every 10-25 years. Therefore there are no new primary roads planned for construction or extension. There will be maintenance on a number of primary roads. There is one relocation of a small section of an existing primary road. The Dagger Lake in Livinstone township is a primary road that will have a new section that generally falls within the 1 km corridor of the existing road. The main reason for this proposed relocation is to avoid a steep hill. Documentation for that section is provided with other LTMD materials.

7.0 Appendices

7.1 Appendix A Forest Management Plan Tables

7.2 Appendix B Comment Form

7.3 Appendix C Summary Map of Harvest Allocations and Primary Road Corridors

Appendix A Forest Management Plan Tables

FMP-7 Projected Available Harvest Area by Forest Unit

FMP-8 Projected Available Harvest Volume by Species Group

FMP-9 Assessment of Objective Achievement

Appendix B Comment Form

Comment Form
2019-2029 Forest Management Plan
French-Severn Forest Management Unit

The Planning Team and the Local Citizens' Committee (LCC) would appreciate receiving your written comments regarding the Forest Management Plan for the French-Severn Forest for the 10-year period April 1, 2019 to March 31, 2029; Stage Two – Review of Proposed Long-Term Management Direction. All comments received will be reviewed by the Planning Team and the LCC.

You may also send your comments directly to:

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Regional Operations Division, Southern Region
300 Water Street, Robinson Place 4th Floor, South Tower
Peterborough, ON K9J 8M5
ildiko.apavaloae@ontario.ca
Phone: (705) 755-3225

Please print clearly

Date: **Name:**
Day/Month/Year

Affiliation (if applicable):

Address:

City/Province: **Postal Code:**

Business Phone: **Home Phone:**

E-mail:

Main Concerns (Please fill in to help us accurately record your comments)

Please keep me informed ❒ (Remain on mailing list)

Specific forest management activity ❒ Specify _____

Possible forest management activities in specific area ❒ Township _____

Description (e.g. lot/concession, lake, road) _____

Concerned about wood supply ❒ Species? _____

Other concerns ❒ Specify _____

Comments: (please use back of sheet)

The Ministry of Natural Resources and Forestry (MNRF) is collecting comments and information regarding the forest management and the contingency plans under the authority of the Crown Forestry Sustainability Act to assist in making decisions and determining further public consultation needs. Comments and opinions will be kept on file for use during the forest management planning period and may be included in study documentation which is made available for public review. Under the *Freedom of Information and Protection of Privacy Act*, personal information will remain confidential unless prior consent is obtained. However, this information may be used by the MNRF as public input on other resource management surveys and projects. For further information regarding this Act, please contact Gary Meddick, Regional Information Management Specialist, MNRF at (705) 755-3228.

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Date Received:	Stage of Plan: ❶ ❷ ❸ ❹ ❺	Request for Response:
Given to:	Follow Up Date:	Response Received:
Response Sent:		

Comments: (Please use additional pages or maps as required)