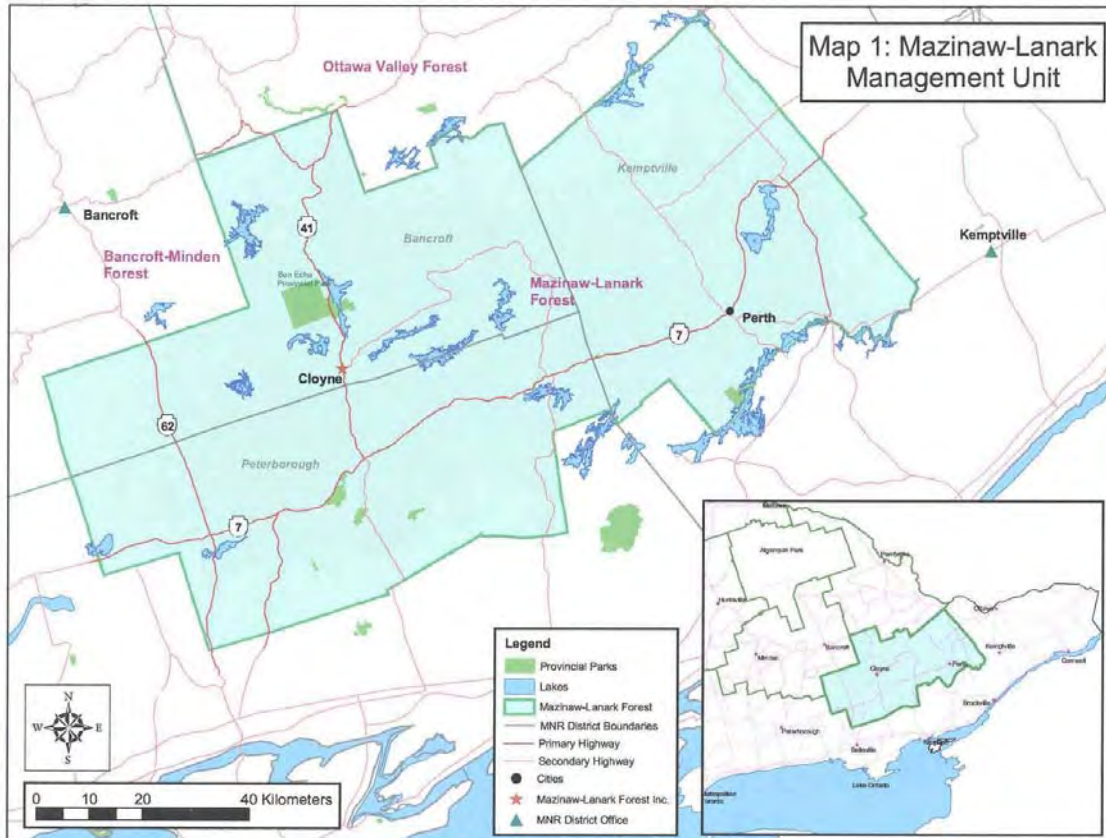


## 7.0 Summary of the 2011 to 2021 Mazinaw-Lanark Forest Management Plan

### Location

The Mazinaw-Lanark Forest Management Unit (MU) is located within the Bancroft, Kemptville and Peterborough Districts and the Southern Region of the Ministry of Natural Resources (MNR) as depicted on the map below.



### Public Contacts

The public contacts for the plan are:

Matthew Mertins, R.P.F.	Plan author	613-336-0816 x 223
Gareth Davies, R.P.F.	MNR Management Forester	613-332-3940 x 248
Tom Sheppard	LCC representative	613-332-3940 x 249

### Management Responsibility

The Mazinaw-Lanark Forest (Management Unit # 140) was licensed to Mazinaw-Lanark Forest Inc. in April 30, 1998, under Sustainable Forest License (SFL) No. 542621. The company administers its forest management planning activities and operations from its office located in Cloyne, Ontario. MNR administration for the forest is led by the Bancroft District MNR office with Kemptville and Peterborough District MNR offices in supportive roles. More details about the administration of the forest can be found in section 2.1 of the plan.

## Local Citizen's Committee Participation

A member of the local citizen's committee (LCC) has participated in the preparation of the forest management plan as a planning team member and attended all information sessions. The proposed management strategy, long-term management direction and forest management plan were presented to the committee and input was requested on these products as well as the background information.

The LCC has prepared the following brief statement of *agreement* with the forest management plan (planned operations):

*The committee is generally supportive of the forest management plan as outlined in the LCC report.*

The LCC report can be found in Section J of the supplementary documentation of the FMP.

## Long-term Management Direction Summary

The Long-Term Management Direction (LTMD) for the forest provides guidance for the levels of access, harvest, renewal and tending activities required to achieve the desired future forest and benefits. In the development of the LTMD, management objectives and indicators are identified, and analytical methodologies, models and tools regarding forest regulation, social and economic assessment, wildlife habitat supply and landscape management are used. This is discussed in Section 3 of the FMP which references supporting details in the supplementary documentation to the plan.

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. A balanced achievement of the quantitative and qualitative biological, social and economic objectives, will result in the desired long-term future forest condition and benefits.

### Plan Objectives and Indicators

As required by the *Crown Forest Sustainability Act*, management objectives for the Mazinaw-Lanark Forest must be compatible with the sustainability of the Crown forest, and indicators of objective achievement must be identified. In addition, the *Crown Forest Sustainability Act* requires that each FMP contain management objectives relating to:

- (a) Crown forest diversity, including consideration for the conservation of natural landscape patterns, forest structure and composition, habitat for animal life and the abundance and distribution of forest ecosystems;
- (b) Social and economic factors, including harvest levels and a recognition that healthy forest ecosystems are vital to the well-being of Ontario communities;
- (c) The provision of forest cover for those values that are dependent on the Crown forest; and
- (d) Silviculture for the harvest, renewal and maintenance of the Crown forest.

Table FMP-9 (located in Section 9.0) summarizes management objectives, indicators, desirable levels and associated targets and presents an assessment of achievement of desirable levels for each objective, for those which can be assessed at this time. The management objectives, indicators, desirable levels and targets were developed with input from the Mazinaw-Lanark Forest LCC (through the Desired Forest and Benefits meeting), the planning team, and MNR

advisors. Sources of information considered in their development included, but were not limited to: the current FMP, background information, forest management guides and policies, Reports of Past Forest Operations, MNR forest management planning direction and training, and scoping investigations for the 2011 to 2021 FMP.

For each management objective, at least one indicator of objective achievement was developed, along with an associated desirable level(s) and target(s). Some objectives have multiple indicators to measure achievement. A desirable level is a specific number, a range or a trend for an indicator, to be achieved and maintained over time. As with desirable levels, targets are specific numbers, ranges, or trends, with a timeframe for achievement. The establishment of targets for each objective reflected a balancing of objective achievement and considered:

- (a) Social, economic and environmental considerations;
- (b) The associated indicator and its desirable level;
- (c) The current forest condition; and,
- (d) The short-term (10 years), medium-term (20 years) and long-term (100 years).

The rationale used in setting desirable levels and targets is summarized in the Analysis Package (Part A of the Supplementary Documentation).

Modeling with the Strategic Forest Management Model (SFMM) assisted in quantitative scoping investigations and the development of the long term management strategy (see section 3.6) that balances the achievement of management objectives over time. There are a total of 25 objectives and 116 indicators in this FMP.

### **The Long Term Management Direction**

The Long Term Management Direction is represented by the types and levels of access, harvest, renewal and tending activities required to manage forest cover in a manner that balances the achievement of management objectives over time. The MNR approved Strategic Forest Management Model (SFMM) is used to develop the Long Term Management Strategy.

The development of the Long Term Management Direction is an iterative process whereby results are examined and SFMM inputs are adjusted as required to improve the model's ability to meet management objectives. This process commonly involves adjusting volume targets, harvest flow policies and targets for the forest diversity indicators – forest unit area, old growth, mature forest and wildlife habitat. As each case is run the resulting harvest volume, forest diversity indicators, silvicultural expenditures and the silvicultural treatment program are examined. The process continues until the planning team is satisfied that no further significant improvements can be made, that on balance objectives have been achieved, and that the solution is practical and can be implemented. The modeling process that led to the Long Term Management Direction is described in section 3.6 of the plan.

The outputs of forest modeling for the Management Strategy provide the source for the long term (100-year) projections of quantifiable objectives and are documented within the plan in the following tables:

- (a) Projected Forest Condition for the Crown Productive Forest (Table FMP-5);
- (b) Projected Habitat for Selected Wildlife Species (Table FMP-6);
- (c) Projected Available Harvest Area by Forest Unit (Table FMP-7); and
- (d) Projected Available Harvest Volume by Species Group (Table FMP-8);

These tables can be found in section 9.0 of the FMP.

## Planned Forest Operations for the 10-year Plan Term

In order to describe the planned forest operations, it is necessary to first explain some forestry terminology:

**Selection** management is carried out in tolerant hardwood stands (sugar maple-beech dominated forest stands) that have trees of sufficient quality to manage the stand in an uneven-aged approach wherein there is a desired distribution of trees by size class and harvests are undertaken every 20 to 30 years. Note that “tolerant” refers to the tolerance of these species to establish and survive in relatively low light conditions and then respond positively to increases in available light after partial cutting. Emphasis is placed on spacing residual trees by removing trees of lesser health and vigour. Two main objectives for selection stands are to improve the growth rate of the stand, and also to improve the overall health and quality of the remaining forest.

**Shelterwood** management is a form of partial cutting in which the mature forest is removed in a series of harvests. Typically, a seeding cut is undertaken to provide the proper light conditions for trees of moderate tolerance to shade (e.g. white pine, yellow birch, red oak). The young forest is established under the shelter of the mature forest. As the young forest grows, one or more removal harvests are undertaken to provide more light to the developing young stand. However, even after a final removal cut, several mature trees are left to provide structural diversity and important wildlife habitat. Shelterwood is also an appropriate management system for tolerant hardwood stands that, due to past cutting history or limited site potential, have insufficient quality to be managed by the selection system.

**Clearcutting** has long been recognized as a form of management wherein all the mature trees are removed at once. Clearcutting still involves the removal of the majority of the mature trees, however, provincial guides<sup>1</sup> require the maintenance of several residual trees to be left after the harvest and often residual patches of uncut areas are to be left as well. Clearcutting is an appropriate management system for many mixedwood stands and stands to be managed for tree species that are intolerant of shade (e.g. poplar, white birch, jack pine).

Each stand is assigned to a forest unit based on species composition, stocking and history. All stands within a forest unit are managed under the same silvicultural system but may be managed with different treatments (e.g. planting, site preparation, tending) and may have different objectives in terms of different future forest conditions. The management strategy is indicated through the Silvicultural Ground Rule.

Each stand to be harvested is assigned a Silvicultural Ground Rule. Each Silviculture Ground Rule (SGR) describes the components that make up an individual SGR, including a description of the current and future stand conditions, renewal treatment options and the regeneration standards that are to be met. Each SGR is intended to describe the harvest, renewal and tending activities that will be carried out on a given stand to allow the current Forest Unit, following harvest, to succeed to the Future Forest Unit, whether it is similar to the pre harvest stand or a different Forest Unit.

## Planned Harvest Operations

Results of the long term strategic planning were used to plan operations for the ten year term of this plan. The following table summarizes the harvest operations that are planned (i.e. in detail)

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<sup>1</sup> OMNR. 2010. Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales. Toronto: Queen’s Printer for Ontario. 211 pp.  
*Forest Management Plan Summary*  
*2011-2021 Mazinaw-Lanark Forest Management Plan*

for the first five-year term (2011-2016), and those which are proposed (i.e. less detail) for the second five-year term (2016-2020) of the FMP. The allowable harvest area and percentage of the total 10 year available harvest area for each of the 3 major silvicultural systems is listed below (See section 4.3 of the FMP for more details):

<b>Silvicultural System (i.e. Harvest System)</b>	<b>10-year Available Harvest Area (ha)</b>	<b>% of 10-year Available Harvest Area</b>
Clearcut	3,395	14 %
Shelterwood	10,007	41 %
Selection	10,968	45 %
<b>Total</b>	<b>24,370</b>	<b>100%</b>

### **Harvest Area and Volume by Forest Unit and Species Group**

The estimated available harvest areas for the 10-year plan term summarized by principal forest units and the harvest volumes (m<sup>3</sup>) associated with the harvest areas by the principal species groups are listed below:

<b>Forest Unit</b>	<b>Available Harvest Area (ha)</b>
INTcc	1,208.8
MXCcc	205.2
MXHcc	1,947.5
PRcc	33.4
HDus	1,800.0
ORus	3,484.0
PWus	4,722.9
CEsel	63.5
HDsel	10,000.0
HEsel	904.2
<b>Total</b>	<b>24,369.5</b>

<b>Species Group</b>	<b>Available Harvest Volume (m<sup>3</sup>)</b>
PWR	448,933
SPF	160,436
OC	78,985
PO	282,000
BW	78,363
TOL	794,432
<b>Total</b>	<b>1,843,148</b>

### **Planned Road Access**

The forecast (10 year) road construction summarized for 2 road classes (primary and branch roads) that are needed to access all harvest and renewal operations over the 10-year term are listed below. Operational (i.e. tertiary) roads are not listed. (See section 4.5 of the FMP for more details)

<b>Road Classification</b>	<b>Forecast Road Construction (km)</b>
<b>Primary</b>	<b>0.7</b>
<b>Branch</b>	<b>27.8</b>
<b>Total</b>	<b>28.5</b>

The Road Use Management Strategies for the new branch roads are located within the Supplementary Documentation (Part G). The proposed primary and branch road locations associated with the 2011-2021 FMP are shown on the areas selected for operations maps and also on the FMP summary map (Appendix 1).

The management strategies for each road are consistent with those indicated in the Crown Land Use Policy Atlas.

### Planned Forest Renewal and Tending Operations

The forecast (10-year) renewal and maintenance activities that are required to meet the plan objectives are listed below by renewal activity type. These renewal activities will be carried out on the current planned harvest areas as well as areas harvested during past plan terms. Artificial regeneration refers to tree planting and seeding. Supplemental treatment usually refers to an area that is regenerating naturally that needs some supplemental (usually tree planting) treatment to meet the regeneration standards. (See section 4.4. of the FMP for more details)

Renewal Activities	Forecast Treatment Area (ha)
Natural Regeneration	19,964
Artificial Regeneration	2,133
Total Regeneration	22,097
Retreatment	0
Supplemental	556
Total Tending	5,868

### Area of Concern Prescriptions

The forest provides for many forest values. Some values have the potential to be negatively impacted by forest management. The areas around these values are termed *Areas of Concern*. An area of concern may be a social value such as an authorized hiking trail or an archaeological site or it may be an ecological or environmental value such as a stream or significant wildlife habitat feature (e.g. a great blue heronry, a hawk nest, deer wintering area, moose aquatic feeding area or a provincially significant wetland).

The FMP includes Area of Concern prescriptions for many different values. These prescriptions may include a no-cut buffer zone, an area with access restrictions and/or a modified management area wherein there may be restrictions on timing of harvest or silvicultural activity, method of harvest or types of trees that can be harvested. Some prescriptions are developed from the direction in a forest management guide and others are developed at the planning team level. A few examples of the many Area of Concern prescriptions follow to give the reader a sense of Area of Concern prescriptions:

*Example 1. An active **red-shouldered hawk** nest receives a 50 m radius no cut reserve with no new access roads allowed. Outside this 50 m radius is a further 150 m wide zone in which only selection cutting may occur and a uniform 70% canopy closure must be maintained. Road construction is not permitted in this zone unless no feasible alternatives exist and approval is obtained from MNR. Outside of this 200 m zone an additional 100 metres of modified area exists where forest canopy closure must continue to be maintained above 70% but roads may be constructed. Operations in the modified zones must occur outside the nesting period to avoid disturbing the birds.*

*Example 2. Conifer dominated stands may provide critical thermal cover with a **core deer yard area**. A minimum amount of conifer must be retained to continue to provide winter shelter while harvesting of hardwoods is encouraged to create food.*

*Example 3. A **multiple-use lake** with shoreline values and features will receive a minimum 50 metre no cut reserve with a further 50 metre modified area where 50% canopy closure must be retained (ie. no clear cutting is permitted). This prescription is in excess of what is required to protect the water quality and fish habitat but will provide an enhanced shoreline buffer from users of the lake.*

Operational prescriptions for areas of concern and silvicultural ground rules for regular operations have been prepared in accordance with the applicable forest management guides. There are no areas of concern or silvicultural prescriptions that are exceptions to the guides. Operational prescriptions for areas of concern have been prepared consistent with the Endangered Species Act to protect habitat related to species at risk known to exist on the management unit (See section 4.2.1 of the FMP for more detail).

## **Issues**

Concerns have been communicated to the planning team from various cottage and ratepayer associations and individual cottagers about harvest operations in the vicinity of several area lakes. Most of the concerns are related to the impact of operations on the lake viewscape, use of roads (ie. timing of operations) and the potential impact on values and features associated with these lakes.

Members of the planning team have met with these individuals and representatives of the cottage and lake associations throughout the planning process.

These issues were referred to the Plan Author, District Manager and Regional Director for formal issue resolution.

Additional details on these issues can be viewed in the Summary of Public Consultation Supplementary Document I of the FMP.

## **Public Consultation**

Public inspection of the MNR approved Forest Management Plan is the last formal consultation opportunity. The purpose of this consultation period is to advise the public that the MNR approved forest management plan is available for inspection from March 2011 to April 2011. During this inspection period the public may make a written request for an individual environmental assessment of a specific proposed forest management activity in the forest management plan.

## **Summary Map**

Proposed harvest, renewal and tending operations, locations of existing and new primary and branch road construction for the 10 year term are shown on the attached map (Appendix 1). The map also contains an index map showing the location of the management unit within the province.

## **Appendix 1: Summary Map**

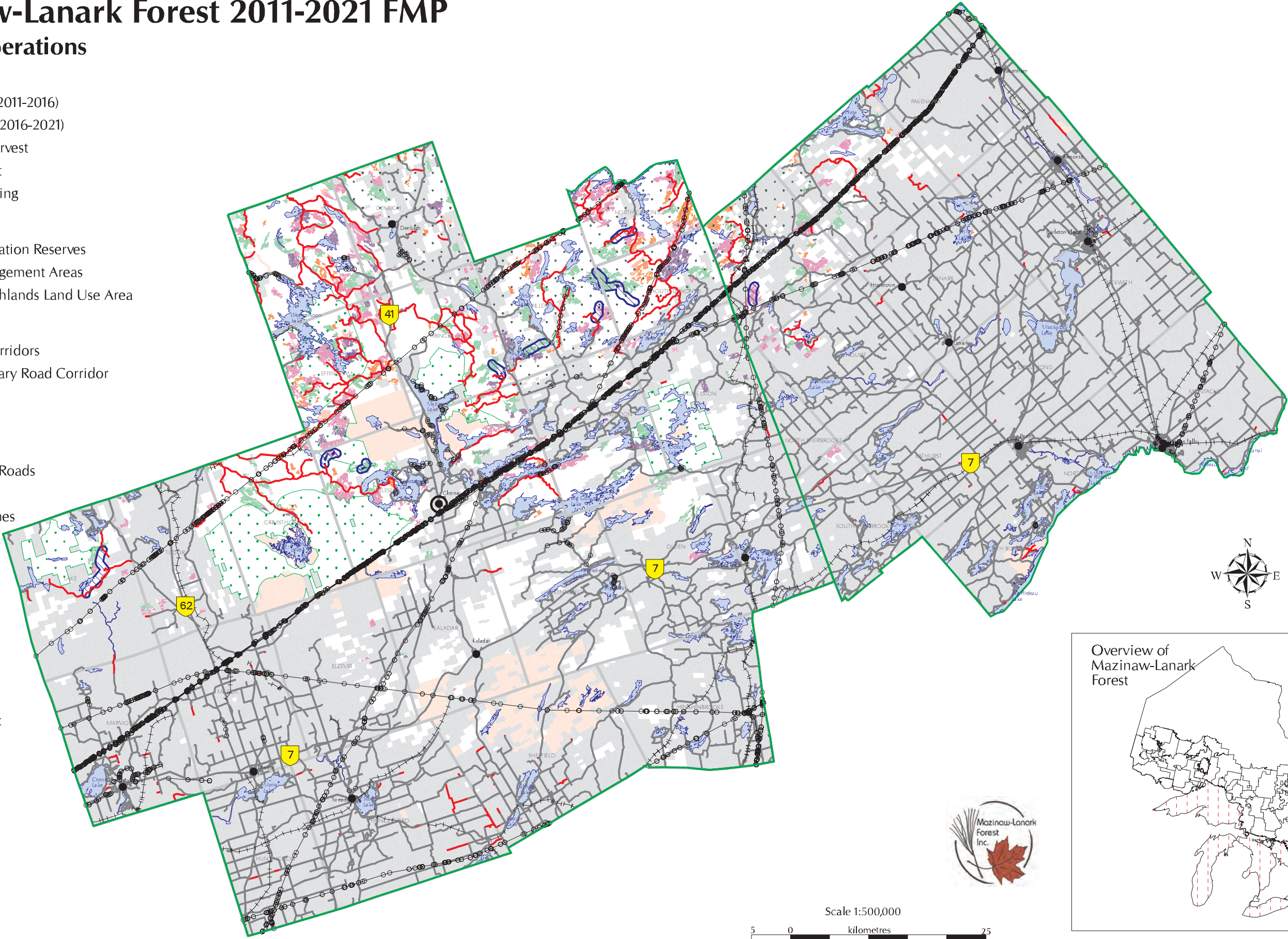


# Mazinaw-Lanark Forest 2011-2021 FMP

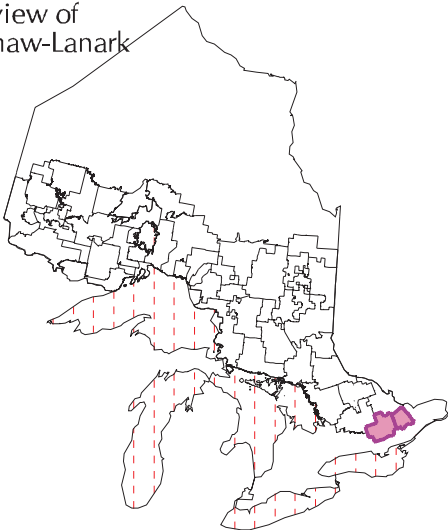
## Planned Operations

- Term 1 Harvest (2011-2016)
- Term 2 Harvest (2016-2021)
- Contingency Harvest
- Bridging Harvest
- Renewal & Tending
- Private Land
- Parks & Conservation Reserves
- Enhanced Management Areas
- Madawaska Highlands Land Use Area
- Lakes & Rivers
- Branch Road Corridors
- Confirmed Primary Road Corridor

- Highways
- Primary/Branch Roads
- Other Roads
- Transmission Lines
- Railway
- Management Unit Boundary
- Township Boundary
- Towns
- Mazinaw-Lanark Forest Inc.



Overview of  
Mazinaw-Lanark  
Forest



Scale 1:500,000

5 0 kilometres 25

