Managed Forest Plan for the 2018-2027 Term

of the

2018-2037 Planning Period

for the

Sault Ste. Marie Regional Conservation Authority Properties

per the updated January 2012 standards for the
Managed Forest Tax Incentive Program (MFTIP)

Written by

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Sault Ste. Marie, ON

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June 20, 2017

Abstract

The Sault Ste. Marie Region Conservation Authority (SSMRCA) owns and manages approximately 2,070 hectares (5,117 acres) of forested and non-forested land within the City of Sault Ste. Marie and the Township of Prince. The SSMRCA land includes eight mostly forested areas of land known as:

- Hiawatha Highlands Conservation Area 862 ha (2,129ac.);
- Fort Creek Conservation Area 77 ha. (191 ac.);
- Headwater Property 132 ha. (325 ac.);
- Burke Property 122 ac. (302 ha.);
- Walls Lake Property 190 ha. (469 ac.);
- Gros Cap Conservation Area 59 ha. (146 ac.);
- Shore Ridges Conservation Area 378 ha. (934 ac.); and,
- Marks Bay Conservation Area 106 ha. (262 ha.).

The total forested land which is part of this Managed Forest Plan (MFP) is calculated to be 1,925.43 ha. (4,757.83 ac.)

The current Managed Forest Plan final term of the 20 year Planning period (herein referred to as MFP) expires on December 31, 2017.

In 2005, a review was undertaken of the forest management activities carried out on the SSMRCA properties under an existing MFP. The purpose of this review was to advise and provide feedback to the SSMRCA on the progress and implementation of the 1998 – 2007 MFP and identify any gaps including recommendations or strategies to seek improvements. A final term MFP (2008-2017) of the 20 year period spanning the years 1998-2017 was prepared and Approved by Regen Forestry addressing a number of identified gaps in the previous 1998-2007 MFP and meeting the specifications to qualify for the Managed Forest Tax Incentive Program. The 2008-2017 MFP was developed following three formal public consultation events and through ongoing communication with stakeholders and the committees and the Board of the SSMRCA. The MFP included updating through field work, the forested land base data to add additional detail and eligible forest area. Major recommendations stemming from the 2005 forest management activities review were addressed.

Algoma-Manitoulin Forestry Services was engaged by the SSMRCA in 2016 to prepare a new MFP for the planning period 2018-2037 meeting the updated specifications to qualify for the Managed Forest Tax Incentive Program for the 2018-2027 term. This MFP continues to recognize and emphasize the value and functionality of healthy sustainable forest ecosystems in maintaining the watershed forested properties employing practices commonly referred to as Sustainable Forest Management. This approach to forest management was adopted by the MNRF in 1995 following passage of the Crown Forest Sustainability Act, 1994.

Each subsequent Managed Forest Plan contains significant amount of historic information and documentation from previous plans to maintain the continuity of information and documented improvements. In the interest of simplicity and continuity between Plans, this MFP uses a format not dissimilar to previous MFP's but incorporating new information and/or Sections as required by MFTIP, technology or deemed necessary by the Planning Team.

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1.0 Property Owner Information

1.1 Introduction

This Managed Forest Plan meets the requirements for the Sault Ste. Marie Region Conservation Authority (SSMRCA) properties to maintain active status in the Managed Forest Tax Incentive Program (MFTIP). A detailed management program is included for the first 10-year term from **January 1, 2018 to December 31, 2027** of a 20-year planning period **2018-2037**. The 5-year Landowner Report will be completed and submitted by **July 31, 2022**. The 10-year Landowner Report and Approved Updated Managed Forest Plan for the term 2028-2037 will be completed and submitted by **July 31, 2027**.

Note: Managed Forest Plans are required to adhere to a standard format as set out by MFTIP. The structure of this plan has been modified from the regular MFTIP format to allow for the individual forested management areas to be distinct. The *Main Section – ALL SSMRCA Properties* Sections 1.0 through 10.0 follow the outline for the SSMRCA MFTIP plan. Specific details for some of the sections for each of the management areas follows the same Main Section organization but are identified as Subsections with letter prefixes identifying the specific management area, for example, Hiawatha Highlands Conservation Area subsections are prefixed HH before the section number.

1.2 Registered Property Owner:

Name: c/o Rhonda Bateman, General Manager

Company: Sault Ste. Marie Region Conservation Authority

Mailing Address: 1100 Fifth Line East, Sault Ste. Marie, Ontario

Postal Code: P6A 6J8

Telephone: (705) 946-8530 ext 1005

E-Mail: rbateman@ssmrca.ca

1.3 Plan Author Information:

Name: Laing W. Bennett R.P.F. MFPA

Company: Algoma-Manitoulin Forestry Services

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Postal Code: P6A 4J2

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2.0 Property Location Information

2.1 Property Roll Numbers

Table 1: ALL Properties - Eligible Managed Forest Areas

Property	Property Location		Assessment Roll Number	Assessment Roll Area (Acres)	Managed Forest Area (Acres)
Gros Cap	Township: Prince		57660000000029700000	146.05	146.05
	Lot: *	Sect 31 NW 1/4 pt			
Walls Lake	Township: Prince		57660000000028400000	160.00	160.00
	Lot:	Sect 29 NE1/4			
	Township: Prince		57660000000028500000	80.00	80.00
	Lot:	Sect 29 SE1/4 pt			
	Township: Prince		57660000000028800000	40.00	40.00
	Lot:	Sect 29 SW1/4 pt			
	Township: Prince		57660000000028900000	40.00	40.00
	Lot:	Sect 29 SW1/4 pt			
	Township: Prince		57660000000029000000	149.00	122.81
	Lot:	Sect 29 NW 1/4pt			
Shore Ridges	Township: Parke, City of SSM		57610600700600006000	585.56	115.00
	Lot:	Sect 9 pt, Sect 10 pt, Sect 3 pt			
	Township: Parke, City of SSM		57610600700600696000	295.86	18.65
	Lot:	Sect 4 parts			
	Township: Parke, City of SSM		57610600700600840100	38.84	30.15
	Lot:	Sect 5 parts			
	Township: Parke, City of SSM		57610600700700701000	13.51	0
	Lot:	Sect 4 pt, SW1/4			

*The original townships were divided into Sections in this part of Ontario.

(Note: all properties are located in Algoma District)

Table 1: ALL Properties – Eligible Managed Forest Areas (Con't)

Property	Property Location		Assessment Roll Number	Assessment Roll Area (Acres)	Managed Forest Area (Acres)
Marks Bay	Township: Parke, City of SSM		5761060090105000	261.80	261.80
	Lot: *	Sect12 S1/2 pt, Sect 13 N1/2 pt			
Headwaters	Township: Korah, City of SSM		5761060050408000	325.00	325.00
	Lot:	Sect 4 SE1/4 pt SW1/4pt			
Burke	Township: Korah, City of SSM		5761060050404000	80.50	80.50
	Lot:	Sect 3 NE1/4pt:			
	Township: Korah, City of SSM		5761050050106000	221.90	221.90
	Lot:	Sect 2 NW1/4, NE1/4 pt			
Fort Creek	Township: Korah, City of SSM		5761050035058000	176.35	168.29
	Lot:	Sect Surv Stewart Var pt Blks			
	Township: Korah, City of SSM		5761050042102000	14.51	14.51
	Lot:	Sect Surv Stewart Blk 24 pt			
Hiawatha	Township:Tarentorus, City of SSM		5761030095001000	1776.57	1776.57
	Lot:	Sect 1pt,2pt,3pt, 10pt,11pt,15pt,			
	Township:Tarentorus, City of SSM		5761030092005202	284.38	280.77
	Lot:	Sect 9 S1/2			
	Township:Tarentorus, City of SSM		5761030092141001	68.00	68.00
	Lot:	Sect 16 NE1/4 pt, NW 1/4 pt			

*The original townships were divided into Sections in this part of Ontario.

(Note: all properties are located in Algoma District)

2.2 Policies and Regulations

The federal or provincial regulation that must be adhered to when initiating or conducting forest management activities on the SSMRCA properties are those dealing with water crossings and their potential impact upon fish habitat. This entails applying and receiving permits for water crossing from the Department of Fisheries and Oceans. With the new plan's primary objectives including forest health and watershed protection, the plan implementation will require compliance with these regulations. This Managed Forest Plan (MFP) will demonstrate that the SSMRCA is reflected as a stewardship leader for private land in the Algoma district.

Other policies that will be upheld in the new plan will be the mandatory use of Registered Professional Foresters (R.P.F.), with relevant experience, for implementing the prescribed forestry related activities (discussed further under Section 5.3 – Strategy for Implementation). As well, any tree marking will be undertaken by Ontario Certified Tree Markers. The forest related Objectives of this Plan will be carried out by applying good forestry practices defined as:

> *"the proper implementation of harvest, renewal and maintenance activities known to be appropriate for the forest and environmental conditions under which they are being applied and that consider and minimize detriments to forest values including significant ecosystems, important fish and wildlife habitat, soil and water quality and quantity, forest productivity and health and the aesthetics and recreational opportunities of the landscape"* [1]

This will be supported by using and applying the current silvicultural and environmental guides used for forest management on Crown lands in this Great Lakes-St. Lawrence forest region of Ontario. These will include, but are not limited to:

- MNRF. 2015. Forest Management Guide to Silviculture in the Great Lakes-St. Lawrence and Boreal Forests of Ontario;
- MNRF. May 2015 Forest Management Guide for Great Lakes-St. Lawrence Landscapes;
- MNRF. 2000 A Silvicultural Guide to Managing Southern Ontario Forests;
- MNRF. 2004. Ontario Tree Marking Guide v1.1; and,
- MNRF. 2014. Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales.

Prudent stewardship of public funds that support CA programs requires that appropriate steps be taken to ensure transparent, open and competitive processes. CA staff will avoid direct or indirect, actual or apparent, conflict of interest and advise all appropriate parties of any potential conflict.

Amendments to forest management activities and/or objectives over the course of the 10-year Plan term will follow the standards and review criteria as set out in the Managed Forest portion

[1] Forestry Act R.S.O. 1990

of Regulation 282/98 of the Assessment Act and the (MFTIP) Managed Forest Tax Incentive Guide: updated January 2012.

3.0 General Property History

3.1 Description of Management Property History

Since its inception in 1963, the Sault Ste. Marie Region Conservation Authority has been acquiring properties in both the city of Sault Ste. Marie and Prince Township. Some of these properties have been donated, while others have been selected for their ecological importance, wildlife habitat and flood protection values in co-operation with the Ministry of Natural Resources and Forestry (MNRF). With the early flood control work beginning at Fort Creek, this area was the first property acquired.

Before the inception of the first MFTIP plan in 1998, the SSMRCA along with all other Conservation Authority's in Ontario, under-went drastic financial funding reductions. SSMRCA's forested properties were mainly used for low impact recreational activities and very little harvesting activities had taken place on these lands before this. The next 5-year MFTIP plan recommended a significant amount of harvesting and provided a very poor information base combined with a difficult strategy for implementation. Ontario certified tree markers marked areas and harvesting activities occurred until 2004, when a Forest Committee was established by the SSMRCA, and operations were suspended until a better implementation system had been achieved. This evolved into the Resource Management Advisory Committee (RMAC) in August of 2006. The RMAC was formed with local resource management professionals, to advise and guide forest management activities at the Conservation Authority (CA). In 2005 Regen Forestry was contracted to carry out a review of the forest management activities to identify management gaps, recognize areas of good work and help design a strategy to manage the future forest area that the CA can effectively implement. In 2006 a 10-year MFP was prepared which incorporated the newly designed strategy for sustainable forest management. During the past MFP term, the SSMRCA was not successful implementing those parts of the strategy which spoke to undertaking forest health related harvesting. The 2008-2017 Plan term was something of a challenge for the SSMRCA staff which underwent a change in senior management, staff who were not familiar with the principles of sustainable forest management, and a lack of funding to support forestry activities. The result was that a high proportion of non-quantitative measure related objectives were addressed in lieu of the hard target activities listed on Section 8.0.

3.2 Importance of the Property to the Surrounding Landscape

All of the CA properties address the key water related objectives that Ontario CA's were founded upon. This includes such programs as shoreline protection and source water protection. These objectives are accomplished through the management and maintenance of the conservation areas and forest properties outlined, which contribute to the Sault Ste. Marie and Prince Townships watershed's characteristics and priorities. In the area of shoreline representation and protection, both Shore Ridges and Marks Bay Conservation areas (and to a lesser degree Gros Cap and Walls Lake) provide unique and important representation of a wide

range of shore land ecosystems, including wetlands, beaches and beach ridges, bedrock and glacial escarpments with a wide range of vegetation and forest types. From a source water protection standpoint, Gros Cap, Walls Lake, Headwaters, Burke and north Hiawatha all are located on the upper reaches of the St. Mary's watershed. The forests of these management areas consist mainly of Great Lakes-St. Lawrence tolerant hardwoods, and are surrounded by private properties in Prince Township and City of Sault Ste. Marie lands which employ a wide range of management strategies and practices. The SSMRCA properties provide a unique opportunity to demonstrate good sustainable forestry practices in maintaining and enhancing these forest types.

According to the MNRF[2], 'Good forestry practices' refers to silvicultural activities conducted in ways that enable the stand to maintain ecological processes and wildlife habitats as well as grow healthy plants. They represent what the forestry profession, forest workers, and society have come to expect from all forest management operations. They have been derived from recognition that silvicultural activities should lead to ecological sustainability of managed stands by minimizing harm to other forest values and by protecting significant features that help to maintain the integrity and long-term health of the stand. More specifically they:

- minimize environmental damage to the site (i.e., soil, water, air);
- protect stand components (e.g., trees, associations of trees);
- minimize damage to wildlife habitats;
- encourage sustainable forest management;
- provide for worker safety;
- provide economic benefits to landowners (e.g., growing the right trees for the site, if possible with commercial value, of good quality, in as short a time as possible, with proper and timely stand treatments that combine to maximize landowner return on investment);
- encourage positive public opinion of forestry operations; and,
- reinforce the need for long-term planning

To date, the SSMRCA has, as a private land owner, been empowered to manage the forest lands which protect the watershed in a flexible manner subject to what they can afford, what society believes to be appropriate and what nature will accept being done or not done. There is now clear and present evidence that climate change is a force that will affect how forests are managed in the future and as such the flexibility that the SSMRCA enjoyed to date with watershed management may be more limited in terms of options. Unfortunately there are few resources providing off the shelf answers to climate change mitigation that are useful as action items on a local level. At this point in time impacts are forecast through modelling on an extensive regional scale. e.g., CCRR-44 (MNRF). There is one consensus that is common in most discussions about climate change mitigation, climate change is not a one off event. Rather it is a long term process and healthy sustainably managed forests probably have the best chance of adapting and surviving the changes as they occur over time. Given that the Mission Statement

[2] MNRF. Silvicultural Guide to Managing Southern Ontario Forests

of the SSMRCA is, **"To protect, improve and promote local watersheds through the delivery of resource management services and programs in co-operation with community partners**", maintaining the forest landbase in support of that Mission Statement has and will have a great deal to do with maintaining forest health and the ability of the landscape to absorb and adapt to wind events, drought, extraordinary precipitation events etc.

The management direction with respect to the forest resource is therefore focused on actions or activities that monitor, improve and sustain the health of the forest properties entrusted to the SSMRCA.

Fort Creek and Hiawatha south and west respectively provide for a variety of ecosystem and forest types that are easily accessible to the city population and can provide for a wide range of recreational and interpretive opportunities.

The Voyageur Trail passes through many of the northern properties, and although not a maintenance responsibility of the SSMRCA, it does contribute to public passage through this part of the areas under management thorough this Plan.

Note: A property history in greater detail can be found under each of the individual forested property management areas (see Subsections HH, FC, MB, SR, GC, WL, and H&B).

4.0 Property Location Maps

For the benefit of those not familiar with the CA properties, a property location map (Figure 1) shows the general location of each of the CA properties. A detailed administration map defining the extent and location of each Eligible Managed Forest Areas and can be found under each of the individual forested property management areas herein referred to as (see Subsections HH, FC, MB, SR, GC, WL, and H&B).

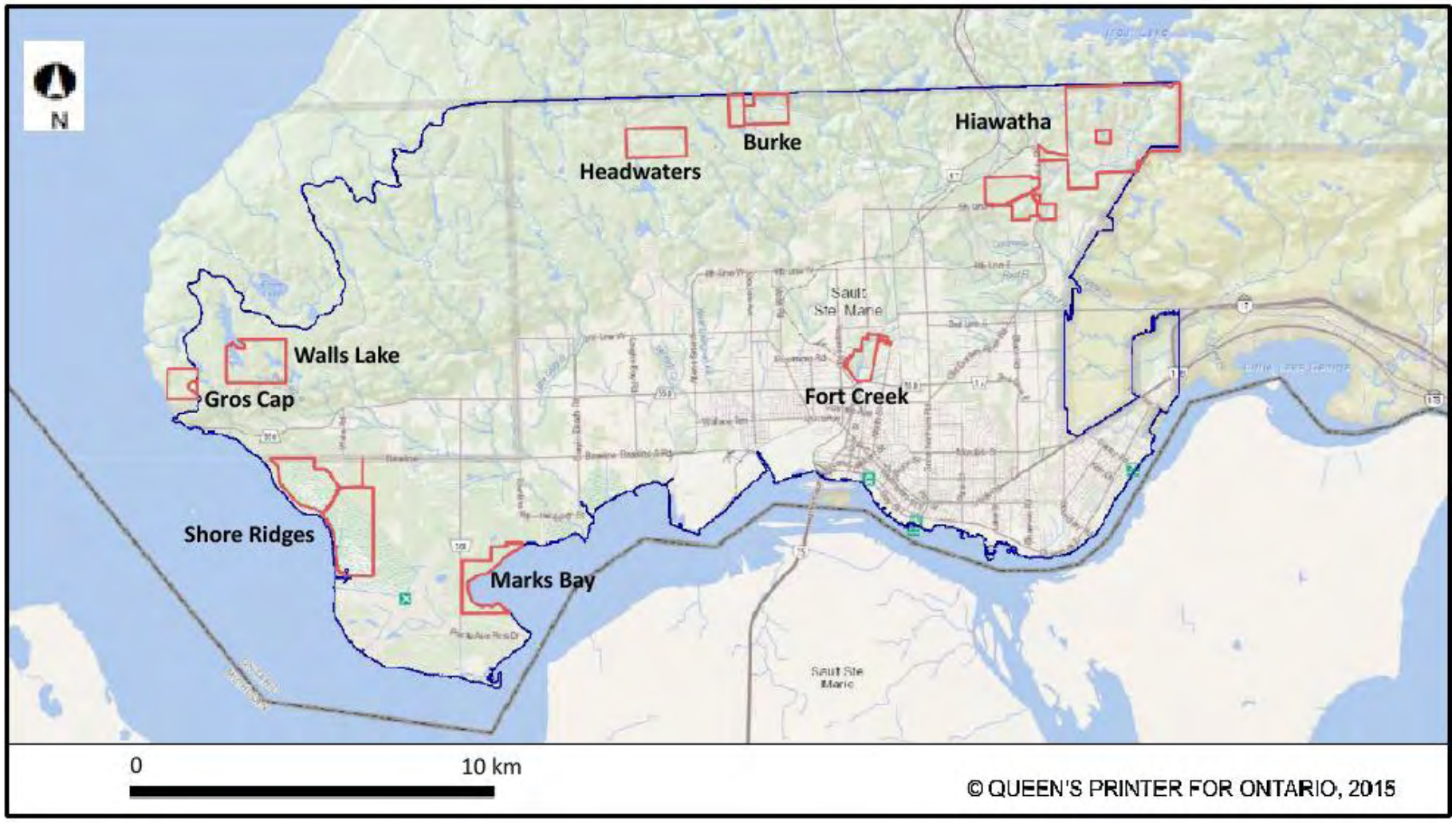

Figure 1: SSMRCA <u>ALL</u> Properties Location Map

5.0 Objectives and Implementation

5.1 Priority of Objectives

Introduction **-** The Conservation Authority's primary function is flood water mitigation. This is accomplished through the planning and implementation of a comprehensive surface water management program. This involves the maintenance of five flood control channels and the Fort Creek Dam, flood forecasting and warnings and the enforcement of O. Reg. 176/06 entitled "Development, Interference with Wetlands and Alteration to Shorelines and Watercourses". This documentation provides jurisdiction to hazard lands that includes, but is not limited to, areas in close proximity to surface water systems or erosion prone areas. Ancillary to the flood mitigation and flood-warning role, are other water related responsibilities such as source water protection planning, shoreline protection and the management and maintenance of conservation areas and forest properties which complement and support these functions.

Mission Statement of the MFP is the Mission Statement of the SSMRCA:

> ***"****To protect, improve and promote local watersheds through the delivery of resource management services and programs in co-operation with community partners".*

This will include the maintenance and enhancement of the long-term health of forest ecosystems, through management and watershed protection, while providing environmental, wildlife, recreational, economic, social, and cultural benefits and opportunities for present and future generations. The community has been actively encouraged to participate in the development of the MFP, and will be encouraged to collaborate throughout the MFP implementation period.

Table 2: Objective Priorities for the SSMRCA 2018-2027 Managed Forest Plan Term

Objective	Low Importance		Medium Importance		High Importance
Watershed Protection					✓
Long Term Forest Health					✓
Environment					✓
Financial Stability					✓
Wildlife Habitat					✓
Recreation				✓	
Enhanced Community Involvement and Communications				✓	
Social, Cultural, Research and Educational				✓	

5.2 Explanation of Property Level Objectives

5.2.1 Watershed Protection

Objective: To protect and/or enhance the watershed characteristics including water quality and quantity by:

- Using best management practices (BMP) to ensure the water quality and quantity of local groundwater sources are maintained (BMP's are project specific and designed to reduce environmental risks associated with specific activities).
- Using BMPs to ensure the water quality and quantity of surface water courses are maintained (e.g. leaving appropriate buffer zones on creeks when forest work is undertaken to prevent soil erosion).
- Retaining intact and contiguous forest cover across the property to minimize any impacts on sensitive areas.
- Monitoring stream and water crossing to ensure that erosion is prevented.
- Applying consistent buffer zones around watershed features such as seepages, creeks and streams using applicable and appropriate provincial and federal legislation and policies.

5.2.2 Long Term Forest Health

Objective: Encourage opportunities for the SSMRCA and community economic development in an environmentally sensitive and sustainable manner giving consideration to the Conservation Authority's primary mandate by:

- Preparing, implementing and monitoring silvicultural prescriptions to improve the structure, quality, environmental hardiness and species composition of specific stands within the financial limits of the Conservation Authority, while considering other needs and objectives.
- Establish and maintain boundary markers to very clearly identify to any and all adjacent landowners and any contractors working on the CA property the boundaries of the CA properties.
- Following acceptable standards of practice for forest operations, silviculture and wildlife habitat management using provincial forest and landscape management guides.
- Using both certified Tree Markers and Registered Professional Foresters to implement silvicultural prescriptions and oversee forest harvest operations.
- Ensuring that periodic tree marking audits by a third party take place to ensure quality control and assess that silvicultural objectives and targets are being met as described in the MFP.
- Completing monitoring and compliance inspections, monitor harvest operations including filing compliance inspections to ensure adherence to prescriptions.
- Identify forest based products and promote opportunities that optimize financial return to the CA.

5.2.3 Environment

Objective: Maintain and improve the natural forest ecosystems and their attributes while promoting the growth and development of the forest, primarily relying on natural succession and ecological processes by:

- Promoting the development of a mixture of species with special attention to mid-tolerant tree species such as red oak, yellow birch and white pine.
- Implementing where appropriate, silvicultural practices to improve the structure/quality and species composition of specific stands within the financial limits of the Conservation Authority and while addressing other objectives.
- Ensuring potentially damaging effects of forest management activities are minimized (e.g. appropriate season/weather to minimize rutting/soil compaction from harvesting activities, minimizing mechanical damage from skidding, etc.).
- Monitoring the forests for significant signs of disease or insect damage, especially in areas where public safety is a concern.
- Ensuring that the natural attributes of the properties are maintained and protected by clearly marking property boundaries to prevent trespass.
- Use Ontario tree marking and stand and site guides for increasing wildlife habitat(retaining mast trees, leaving conifer clusters, encouraging regeneration, leaving standing dead trees, downed woody debris, etc.), while considering public safety along identified forest trails
- Avoiding harvesting operationally difficult areas to limit site disturbances.
- Reforesting areas where appropriate to increase or replace forest cover, prevent soil erosion and to attain desired regeneration using native species.
- Ensuring existing water crossings within the CA lands and new installations are properly located, installed, maintained and/or decommissioned after use.
- Locating and developing a Forest Values map that has the locations and descriptions of these features. This will include Areas of Concern (AOC's) and disturbance sensitive sites as they are located and identified.
- Preference will be given to using native seed sources for any restoration or maintenance activities where possible and will achieve the desired objective.

5.2.4 Financial Stability

Objective: To maintain or improve the long-term financial security and stability of the SSMRCA in support of each of the other organizational objectives by:

- Administering an economically based plan to manage the forest as a revenue neutral entity by maintaining the **Forest Reserve Account** in which revenues generated from the various forests activities are retained over the term of the MFP for application towards the costs of management of the forest for future generations and climate change mitigation. An adequate and dedicate reserve will ensure that fluctuations from the sale of forest based products do not compromise the ability to properly undertake management work on the property in a timely manner and will permit the provision of ongoing professional services.
- Submitting Annual Operating Plans, Budgets and Year End Reports to the Board of Directors.

- Using the activity database as an operational tool, through the provision of regular updates and annual reports.
- Investigating and acting on other income sources, including non-traditional timber values. This may include, but is not limited to: leasing of trails, ground hemlock harvesting (ongoing at present), private and institutional sector forest management, organizational permits, wedding photo shoots, commercial firewood harvesting, hobby wood products, chaga harvest, carbon offset or sequestration.
- Continue to participate in the Managed Forest Tax Incentive program (MFTIP) to reduce property ownership expense.
- Seek low-cost partnerships, grants and in-kind contributions as practical and available to meet and compliment SSMRCA objectives.
- Optimizing the financial return from forest based products.

5.2.5 Wildlife Habitat

Objective: To provide and maintain wildlife habitat by:

- Ensuring BMPs are followed to protect or enhance wildlife habitat and biodiversity.
- Plan and undertake natural and/or artificial reforestation where appropriate to enhance wildlife habitat.
- Undertake and complete forest wildlife inventories on the various properties through co-operative initiatives with volunteer members and other interested organizations.
- Mapping environmentally sensitive and important habitat (e.g. deer yards, moose feeding areas and calving grounds, stick nests etc.) and limiting access to these areas. (Values Map)
- Monitoring existing and the establishment of any new or intermittent stream or water crossing to ensure that fish habitat is not affected by following the Roads and Water Crossings protocols.
- Using Ontario tree marking and stand and site guides for increasing wildlife habitat (retaining mast trees, leaving conifer clusters, encouraging regeneration food, leaving standing dead trees and downed woody debris, etc.), while considering public safety along trails.
- Identifying endangered species, species at risk, their habitats and applying appropriate protective measures according to MNRF guidelines

5.2.6 Recreation

Objective: Actively maintain, promote, and enhance the recreational opportunities on the CA lands by:

- Providing a reasonably safe environment for permitted recreational activities that encourage responsible and safe recreational and educational activities and their respective maintenance requirements through trail safety inspections and public permitted use regulations.
- Maintaining the present trail and access systems and water crossings (Roads and Water Crossings protocol compliant) for access and use.

- Participate in appropriate stakeholder and partner agreements to try to maintain or increase trail and area uses by interested groups.
- Promoting low environmental impact, non-consumptive recreational activities such as geo-caching, nature appreciation-bird watching, picnicking, photography, hiking, snowshoeing, skiing, orienteering, canoeing and mountain biking.
- Actively discourage motorized vehicle use on non-designated trails using boundary markers, public education and enforcement.
- Develop a system for consistent signage common across all the properties.

5.2.7 Enhanced Community Involvement and Communications

Objective: Encourage and promote community and stakeholder participation through all phases of the Managed Forest Plan (MFP) preparation and implementation by:

- Expanding the existing volunteer Forest Management Committee (FMC) to include a more diverse representation of the community and to address the objectives and priorities outlined in the MFP. Decisions should be made by consensus wherever possible. Further, it is anticipated that potential conflicts between different users can be reduced or eliminated through ongoing dialogue and consensus building. Recommendations for actions from FMC will be considered by the CA following an analysis of the possible costs and options for financing. Generally, the FMC is responsible for:
    - ✓ Identifying and prioritizing issues and concerns which require attention;
    - ✓ Recommending strategies to deal with issues identified by the CA Board and SSMRCA staff,
    - ✓ Consulting with the general public; and
    - ✓ Providing input into the MFP.
    - ✓ Guiding and approving the implementation of the plan (annual operating plans/work schedules)

Additional considerations that should be investigated include:

- Updating the SSMRCA website with ongoing forest management activities for public awareness.
- Involving partner agencies and the public by encouraging active participation through open houses, meetings, etc.
- Integrating disciplines, policies, mandates and requirements of agencies and interests.
- Identifying opportunities for community involvement.
- Outlining requirements for monitoring, and a mechanism to involve and inform the public of the results.
- Continuing to meet and discuss issues with FMC members to ensure public and forest management uses are compatible.
- Partnering with other not-for-profit agencies to seek additional funding support to enable and facilitate costly projects that will require attention and provide educational experiences.
- Continued use of a user group liability form that defines respective responsibilities of the parties involved in recreational or other activities on SSMRCA properties.

- Promoting the highest possible standards of sustainable forest management practices for private land stewardship.

5.2.8 Social, Cultural, Research and Educational

Objective: Encourage and promote social, cultural, research and educational opportunities, which will reflect the land bases' history and ecology by:

- Protecting vistas and providing places for rest, low impact recreation and environmental education.
- Encouraging research that communicates and improves public understanding of the ecosystem and forestry practices.
- Working with the Fire Department and the Police Services to devise Emergency Access Routes for emergency management services (Fire, Police and Ambulance).
- Identifying the location of all past research plot trials on the SSMRCA properties and the agencies responsible.
- Developing and maintaining demonstration areas that portray the practical application of the CA management objectives, good forest management practice and the results of scientific experimentation.
- Enhancing the current relationship with Sault College, Algoma University and other educational institutions providing a local educational land base and outdoor classroom for forestry activities set out as per the MFP.
- Explore the feasibility of documenting and registering all or part of the forested area to demonstrate the feasibility and value of long term carbon sequestration.

5.3 Strategy for Plan Implementation

The SSMRCA will oversee the implementation of all the activities, with support from user groups and consultants. The development of partnerships with volunteers groups such as trail clubs and Sault College will provide educational experience, enhance community involvement, and may provide substantial benefits to the CA in the way of avoiding costly forest condition monitoring. Guidelines, protocol and strategies for information sharing should be developed for liability and procedure reasons.

5.3.1 Staff Responsibility

The following Table 3 outlines the CA staff positions responsibility with regards to implementing the Management Forest Plan from 2018-2027.

Table 3: Staff Responsibilities for the 2018-2027 MFP

Task	Description	Person
Forest Management Committee (FMC)	Develop, maintain and expand FMC	Communications Trails Co-ordinator FM Committee Members
Communications & Community Involvement	Promote CA mandate and "environmental stewardship leading" activities throughout the Sault Ste. Marie area	Public Relations
Reporting, Service Provider Contract Admin.	Creating Annual Reports, Forest Budget and Annual Work Plan using the Table suggested in Appendix A , Contractual Work Negotiation, Quality Assurance	General Manager
Approval	Approval of Annual Reports, Annual Forest Budget, Annual Work Plan and amendments to the MFTIP plan	SSMRCA Board
Recreational	Co-operatively integrate the SSMRCA Recreational Plan with the MFTIP plan	Trails Co-ordinator
Field Activities	Property Boundary Marking, GPS work, Trail Hazard Monitoring & Maintenance, Signage	Field Personnel Trails Co-ordinator
Activity Records	Keep accurate, brief, but separate monthly documentation of forest management activities and public recreation use activities using the appropriate Table for Section 9 documentation as set out in Appendix D	Trails Coordinator
Inventory, Forest Values and Trail Update	Sault College, Sault Naturalists and Voyageur Trail provide information for improving Forest Compartment Database (GPS coordinates)	Trails Co-ordinator GIS Specialist

5.3.2 Forestry Expertise

It is strongly recommended that the CA engage a consultant with experience in the Great Lakes St. Lawrence Forest Region and with R.P.F. credentials, on retainer for an annual review and discussions regarding short-term requirements in implementing the MFP. It is important that consistency be maintained in: plan activity record keeping; forest property information management; and, research data sharing protocols & inventory planning to support the development of subsequent plans.

The SSMCRA will retain as appropriate services from a Certified Tree Marker, a Registered Professional Forester (R.P.F.) and possibly a qualified Forest Operation Technician for the following activities:

- Pre-Harvest Silviculture;
- Harvest Tendering including meeting with loggers;
- Harvest Auditing (Cut Inspection Reports–1 per week of operations; Appendix B);
- Management Forest Plan amendments;
- Hiring Ontario Certified Tree Markers; and
- Tree Marking Audits.

5.3.3 Harvesting Operations

The SSMRCA will contract out all harvesting proposals that require silvicultural prescriptions, in the future. The most effective way of contracting out would be Lump Sum Sales, whereby a tender package is designed and appropriate contractors are identified and pre-selected. Harvesting operations must be carried out by recognized reputable logging organizations that meet all the requirements found in Appendix A (Lump Sum Sale Agreement) and must provide three references of good logging operations (A horse logging demonstration would be very well received under appropriate conditions). In many cases local R.P.F.s and or active certified Tree Markers have a good knowledge of regional contractors capable of diligently undertaking the types of work needed.

5.3.4 Community Partnerships

Community involvement is a high priority and with annual forest management budget constraints, participating in a network with affiliated community organizations is important for implementing the SSMRCA MFP. Developing these relationships will provide opportunities for education, research, community participation and so on. The following recommended working relationships have been identified:

- Improving or verifying the current forest inventory data where required with both the Sault College Natural Resources Program and the Sault Naturalists. See Appendix B for inventory procedure requirements.
- Developing and implementing a forest wildlife inventory and monitoring protocol across the CA properties with the assistance of the Sault College Natural Resources Program and/or the Sault Naturalists.
- Updating trail locations and identifying hazards along trails to be overseen by the Trails Coordinator and including input from the various user groups.

5.3.5 Forest Health & Management Activities Funding

Revenue generating possibilities that should be investigated include, but are not limited to:

- Seeking support through voluntary annual memberships and/or corporate sponsorship.
- Maple syrup and other facilities/sites rental.
- Partnerships will be sought to encourage in-kind value-added work,
- Educational programming.
- Carbon sequestration registration and carbon sequestration donations from local business and industry
  Note: Forest health activities are not necessarily self-financing on an annual basis. Recommend implementing an accounting provision for forest health related work whereby traditional and non-traditional forest products related revenue can be accrued or documented and accounted for on a MFP term basis.

5.3.6 Amendment Protocol for the MFTIP plan

Under the MFTIP program, 10-year appropriate forest management activities often change for various often unavoidable reasons. The SSMRCA is responsible for ensuring that consistent good forest management activities are carried out on its lands to maintain their Managed Forest Plan status. The following approval process should occur for changes with respect to any proposed harvesting activities:

- Hiring an R.P.F. for the activities mentioned in section 5.3.2.
- A plan for changes must be circulated to the following:
    - FMC
    - At least one other R.P.F. (voluntary)
- Recommendations from the consulted parties or individuals and associated issues will be presented to the Board for final decision making.
- Major amendments to the MFP must be processed by an M.F.P.A. in accordance with the MPTIP protocols

This will ensure objectives are carried out in the best interest of the SSMRCA and due diligence is achieved including addressing the potential need for additional public consultation.

6.0 Managed Forest Compartments

6.1 Managed Forest Compartments Maps

The forest compartment maps for the 2018-2027 MFP have not changed from the previous 2008-2017 Plan. They now encompass the following:

- The forest inventory completed from the initial plan in 1997 and selected field work updated in 2005 and 2017;
- The photo interpretation completed in 1997;
- The post-harvest inventory data collected from the forestry activities review from 2005;
- Previous 2008-2017 10-year forest management activities;
- Updated aerial photo interpretation with the new 2004 aerials;
- On ground inventory for the plan renewal of eligible open areas, and suggested areas for forest health improvement harvesting.

Other changes that have been made include:

- Stands less than 1 hectare or 2.471 acres have been removed and amalgamated with the most appropriate adjacent compartment;
- Incorporation of open areas into the total managed forest area (up to 10% open area that can support trees and 25% open area that cannot support trees). Status is the attribute used to classify the land as either EMF (eligible managed forest); PEOA

(productive eligible open area); NPEOA (non-productive eligible open area) and IA (ineligible area) for calculating the actual managed forest area.

Please note that all mapping features except the forest compartment boundaries were created by the SSMRCA.

Note: For each management area, a detailed Forest Compartment Map (Section 6.0) and Compartment Area Summary (6.2) can be found under each of the individual forested property areas Subsections.

6.2 Summary of Managed Forest Compartments

The forest management compartments have been separated with their associated properties and roll numbers. All forest compartments are classified as either EMF (eligible managed forest); PEOA (productive eligible open area); NPEOA (non-productive eligible open area) and IA (ineligible area) with total associated areas. The number of structures or non-forestry outbuildings is also identified.

7.0 Managed Forest Compartments Description

7.1 General Description

The forest compartment general descriptions and specific forest inventory descriptions are summarized respectively in Section 3 and Table 7.1 within the appropriate forested property area chapter.

7.2 Compartment Characteristics and Inventory

The compartment specific characteristics are summarized in Sections 6.1(area) and Table 7.1 (inventory) within each appropriate forested block chapter. The following describes the information collected:

- Physical features, access and water features are on the property maps
- Forest compartment ages are effective 1997 unless otherwise stated.
- The following attributes included for each of the compartments plan:
    - Basal Area (measured in m^2 per hectare using a $2m^2$ prism or stems/acre
    - Status (the eligibility category for calculating allotted Managed Forest-see 6.1)
    - Last date inventoried
    - Property block (e.g. Marks Bay)

The forest inventory for the managed forest compartments has been created as a compilation of the following:

- The forest inventory completed from the initial plan in 1997 by R&B Cormier;

- 1984 OMNR Forest Resource Inventory (FRI);
- The aerial photo interpretation completed in 1997;
- The post-harvest and forest health inventory data collected from the forestry activities review from 2005, 2007 and 2017; and
- The forest resource inventory for the plan renewal of eligible open areas.

As a result of the previous inventory not having estimates of individual forest compartment trees per hectare or Basal Area determinations, there are still significant gaps in the inventory that were outlined for follow-up in the 2008-17 MFP . Some of this work was or redone in 2017 in preparation for the 2018-2027 term of new planning period. The standard for this procedure can be found in Appendix B.

During the preparation of this MFP the MNRF released for 90 day review, the newly completed digital forest inventory for the Algoma Forest which included private lands. The short notice of the circumstance meant it was not feasible with the resources available to complete a review of the new inventory and incorporate it into the renewed MFP in a timely manner. A cursory assessment of the new inventory was undertaken to try to identify any significant differences between the old and new inventories which might suggest that the planned forest health improvement operations listed in Section 8.2 (Table 5) were in need of further review. This was unlikely considering that operational cruising had been undertaken in Dec 2016 however the new forest inventory indicates a significant increase in the number of forest stands and is much more extensive in scope than operational cruising. The assessment did confirm that the Dec 2016 cruising and the MNRF inventory were generally in agreement. The preparation of the new forest inventory for incorporation into the MFP will be undertaken by the SSMRCA using in-house expertise as much as possible to minimize cost. There may, as an outcome of the new forest inventory, be alterations not only to the forest stand descriptions but also the size of the individual compartments potentially changing the amount of area that is eligible under the MFTIP program. It is recommended that the SSMRCA complete a compilation of the new inventory into compartments by the beginning of year 3 (January 2019) of the first 5 year term of this MFP. An assessment of any differences between the eligible forest areas of the old inventory compared to the new should be done by a Managed Forest Plan Approver. If necessary an amendment to the MFP could then be prepared for Approval and submitted to take effect in the second 5 year term of this MFP.

7.3 Compartment History

A summary of the history of the collective forest compartment activities can be found in Sections 7.3 and more specifically the appropriate Subsection of interest to follow. An in depth individual compartment history (1998-2016) is on record at the SSMRCA office.

7.4 Forest Compartment Inventory

The forest compartment inventories for each management area are summarized in Subsection 7.0 (Table 7.4) of the respective management area. An explanation on how the data was collected is located in Section 7.2.

7.5 Wildlife Habitat Inventory

The significant wildlife habitat features can be found in each of the individual forested management areas Subsection 7.0 (Table 7.7).

In addition, the results of a volunteer birder group observations referred to as the annual "Christmas bird count" have been in included as supplementary documentation in the Appendices to indicate the important contribution a healthy sustainably managed forest can make to bird habitat and the subsequent population. An analysis of this apparently long term database may indicate some interesting trends in bird populations in and around the SSMRCA properties.

7.6 Specific Compartment Objectives and Appropriate Management Planned

7.6.1 Long-Term (20-year) Management Objectives

The long-term forest management area objectives are summarized in Section 5.1. These objectives and their associated strategies will guide the management direction of all the forest management areas identified in this plan.

7.6.2 Short Term (10-year) Management Objectives and Appropriate Management Activities

The short-term management objectives are summarized in Section 5.2 for all the management areas; and individually in each Subsection description of the management areas with their management area specific 10-year activities.

7.7 Wildlife Species Noted

The wildlife species noted can be found under each of the individual forested property area's Subsection 7.7 **Wildlife Species Noted**.

8.0 Forest Management Activities 2018-2027 (10 Yrs)

8.1 Forest Management Activities 2018-2027

Table 4: Section 8 - ALL Properties - Forest Management Activities 2018-2027

Objectives *(In no particular order)*	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail, hectares thinned)		Year Scheduled	Comments
	Description of Activity	Quantifiable Measure		
All	Forest Management Activity Review	1 review	2022 (mid term 5 yr	Review activities with or by a person with forest plan/operations competency to ensure objectives are being achieved. Plan revision may be req'd.
All	Hire an R.P.F. on retainer or on a service as required basis for prescription and implementing harvest	1 retainer	2018	Agreement or RFP with service providers- before any harvesting activities occur
Financial Stability, Forest Health, Environment	Annual State of Forest Health Operations Report (includes, budget, past year forest health related activities compared to plan, planned next year activities)	1 report	Annual	Submitted and accepted by the SSMRCA Board each year
Forest Health, Financial Stability, Environment, Research	Prepare a database and maps from the MNRF 2017 FRI (Forest Resource Inventory) for incorporation into the MFP following a review by MFPA	Formatted database, maps Jan 1, 2019	2017-19	New inventory should include digital documentation of all research and education areas as identified by appropriate stakeholders
Education, Community-Communications, Recreation, Environment	Fire, EMS, Police Public Emergency Safety Plan	1 plan	2018, 2022 review	Public Safety - Risk management
Education, Research, Community-Communications	Develop a MOU with Sault College, Algoma U. and agreeable gov't agencies to ensure a symbiotic relationship for identifying forest values, research data, updating inventory, etc.	1 MOU 200 acres	2018 Annual	All properties as appropriate

Table 4 (Cont'd): Section 8 - ALL Properties - Forest Management Activities 2018-2027

Objectives *(In no particular order)*	**Specific Prescription of Activity with quantifiable measurement (e.g., metres of trail, hectares thinned)**		**Year Scheduled**	**Comments**
	Description of Activity	**Quantifiable Measure**		
Watershed Protection, Environment , Community – Communications, Education-Research	Forest Values map. Identifying all past research plot trials, significant cultural heritage, wildlife, vegetation, use fragile forest areas, recreation values, etc.	1 map	Ongoing	As values are located and identified by staff, user groups and forestry expertise. Plots noted at Hiawatha east (PSP)* and PGMN** site near Walls Lake. Research sites
Recreation, Community - Communications	Development of the "Recreation Management Strategy" for SSMRCA properties and include: trail hazard inspections, mitigation, signage notices, trail maps, emergency measures, etc.	1 plan	ongoing	SSMRCA will routinely and separately document major recreation activities in the appropriate MFP (MFTIP) activity review summary Table 4.1(b), Section 9.0 as this may direct heavily influence future objectives
Watershed Protection, Forest Health, Environment, Education	Implement Forest Management silvicultural prescriptions as developed by an R.P.F. ideally with Tree Marking credentials on a prioritized basis over the term of the Plan subject reasonable to forest product markets	ideally 5 prescription areas completed, evenly balanced over the MFP term	2018-2027	Deferring action in some instances because of forest stand maturity, climate related wind events, disease etc. may result in negative impacts upon recreational uses and experience and significant challenges addressing the financial objective.
Education, Research, Communications-Community, Wildlife, Environment	Develop a plan to update wildlife inventory with Sault College natural resource students and/or Sault Naturalists. Complete a wildlife inventory of each management unit area and ensure management practices enhance wildlife habitat.	TBD		Volunteers, Sault College and the local naturalist groups and possibly government agencies to participate in the ongoing inventory and reporting.

Notes: * PSP - Permanent Sample Plot

** PGMN - Provincial Groundwater Monitoring Network

Table 4 (Cont'd): Section 8 - ALL Properties - Forest Management Activities 2018-2027

Objectives *(In no particular order)*	**Specific Prescription of Activity with quantifiable measurement (e.g., metres of trail, hectares thinned)**		**Year Scheduled**	**Comments**
	Description of Activity	**Quantifiable Measure**		
All	Landowner Report to MNRF (MFTIP) with 1st 5-year and final 5 year activities	1 report (concise)	2022 (midterm & final)	Should be able to print database and fill out Section 9 appropriate forms efficiently
Recreation	Develop a trail liability notification program with protocols for public emergency responses.	1 program		Un-assumed trails should be very well identified with durable all weather signage to make all users aware to use completely at "own personal risk".
Recreation, Communication & Community	Enhance SSMRCA FMC for plan implementation	1	Ongoing	Use list from Objectives in section 5. MFTIP must approve changes to Plan.
Communication & Community	Update terms of reference for FMC *	1 document	2018	---
Recreation, Communication & Community	Hold minimum bi-annual meetings with FMC	2 meetings	Annual	---
Environment, Watershed Protection, Recreation	Water crossing and culvert location identification (GPS) with maintenance or decommissioning/rehabilitation program. Identify trail hazards and monitoring schedule	Locate, verify & describe crossing/ culvert type	By 2022	Remove, monitor or improve as required. Trail slopes and valleys are erosion prone as a result of heavy rain events.

Notes: * FMC- SSMRCA Forest Management Committee

8.2 Planned Forest Health Silvicultural Prescription Areas 2018-2027

Table 5, below, does **not** present actual silvicultural prescriptions for the stands within various selected management areas. It is purposely inserted into the MFP as a means of providing insight as to what kind of silvicultural practices are contemplated in the MFP that is focused on maintaining or improving forest health in support of the primary mission of the SSMRCA. Due to the generally high use of the properties by the general public, the comparatively high degree of forestry knowledge and concern held by the user public, it was deemed important to communicate at the outset what the management approach would be with respect to maintaining the health of the forested properties over the term of this MFP.

The areas listed in Table 5 were identified based upon the 1997 inventory and field knowledge as being at a stage of maturity where some tree species, such as Sugar (Hard) Maple, Red Oak and Yellow Birch, which are of value to the landowner and contribute to the objectives of the MFP, need some silvicultural work to support their long term health and survival. The silvicultural work has a lot to do with improving and maintaining the overall condition of the identified forest stands and a lot less to do with generating revenue from harvested wood.

Although preliminary field work was done during the winter of 2016-17 to acquire inventory and forest stand condition data concerning the identified forest stands, Table 5 is presented strictly as an example of what **might** be prescribed by a licenced Forester following additional on the ground field work. The silvicultural system identified by a R.P.F. for application in each specific area will be based upon current state-of-the-art forest science and the conditions found to exist in each of the forest stands surveyed. Table 5 also sets out the silvicultural objective assigned to be achieved by implementing the silvicultural system identified. The actual implementation of any silvicultural system harvest should be done following specific guidelines and contractual obligations set out in sample guidance documents supplied in Appendix A.

It is strongly recommended that the property owner seek assistance from a licenced experienced forest operations Forester or Technician, utilizing tree marking as a primary tool for addressing the silvicultural prescription that has yet to be assigned to each identified candidate silvicultural prescription area.

8.2 Planned Forest Health Silvicultural Prescription Areas 2018-2027

Table 5: Section 8 - ALL Properties - Planned Forest Health Silvicultural Prescription Areas 2018-2027

Stand #	Property	Working Group Species	Silvicultural System	Objective **
81	Hiawatha West	Red Pine	Plantation Thinning	Thin from below, to remove damaged, poor quality trees and improve spacing
103	Hiawatha East	White Pine	Uniform Shelterwood	To promote the re-establishment of White Pine
107	Hiawatha East	Sugar Maple-White Pine	Selection-Group Selection	To promote the re-establishment of White Pine
159	Hiawatha East	Sugar Maple	Selection	To improve forest health through an improvement cut by following the tree marking guidelines for tolerant hardwoods
172	Hiawatha East	Sugar Maple	Selection	To improve forest health through an improvement cut by following the tree marking guidelines for tolerant hardwoods
178	Hiawatha East	Sugar Maple	Selection	To improve forest health through an improvement cut by following the tree marking guidelines for tolerant hardwoods
20	Shore Ridges	Red Oak	Group Selection	To promote the re-establishment of Red Oak
110	Headwaters	Sugar Maple	Selection, Group Selection	To improve forest health through an improvement cut by following the tree marking guidelines and promoting Yellow Birch regeneration
112, 113	Headwaters	Sugar Maple	Uniform Hardwood Shelterwood	To improve forest health through an improvement cut by following the tree marking guidelines and promoting Yellow Birch regeneration
116, 117	Headwaters	Sugar Maple	Uniform Hardwood Shelterwood	To improve forest health through an improvement cut by following the tree marking guidelines and promoting Yellow Birch regeneration
45,46, 48, 53, 54*	Walls Lake	Sugar Maple	Selection	To improve forest health through an improvement cut by following the tree marking guidelines for tolerant hardwoods

Notes: * Walls Lake Property has to be cruised as of March 1, 2017 still. An access agreement is negotiable with one of the adjacent owners.
** Each and all silvicultural systems listed require a prescription by an R.P.F.to address the stated objective prior to implementation. All prescriptions are to be in accordance with provincial tree marking and silvicultural guides.

9.0 Report of Forest Activities

The reporting of forest related management activities linked to the MFP Objectives of Section 5.0 will be done promptly to ensure that accurate but brief records are kept. A simple excel spreadsheet has been developed for the SSMRCA to annually and efficiently complete activity records for each individual management area (Appendix D).

Table 6: Section 9 - ALL Properties - Report of Past Forest Management Activities 2008-2016 (2017 pending) reports MFP related forest management activities except those relative to Objectives 5.2.6, 5.2.8. It has the same format as the planned activities listed in Table 4, Section 8.0 - Forest Management Activities 2018-2027.

Within each of the specific management areas, the Section 9 information is summarized in two formats of record keeping tables. The Section 9a report table format documents forest management activities conducted on a specific management area as set out in the respective table for each Section 8.0 of each management area of the 2008-2017 MFP. This table identifies the MFP objective, the documented activity and the results based quantifiable management activity. The Section 9b is a new report table format introduced for this MFP renewal which documents, for a specific management area, the extensive forest based user activities, primarily recreation and education. This table identifies the MFP objective, the documented activity and the number of user group participants/volunteer. The intent of this structure, which is a reworking of the 2008-2017 report structure, is to separate the reporting of planned activities (e.g. Table 4, Section 8) with specific results based forest management activity targets from those activities and objectives associated with the use or enjoyment of the forest which could be viewed as some of the beneficiaries of the long term sustainable forest management effort.

The foregoing activity report is in part a restatement of the previously documented and reported first 5 year forest activities during the 2008-2017 term into a brief readily understood format. The use of this record keeping and reporting format shall be maintained for the 2018-2027 MFP term. Using the excel spreadsheet format as designed and supplied will allow the SSMRCA to readily create 5 or 10 year summaries of either table format for reporting to MFTIP or other agencies going forward.

Blank examples of Section 9a & 9b Tables have been placed in Appendix D and an electronic copy of each table will be part of the Appendix D Digital Database.

Table 6: Section 9 - ALL Properties - Report of Past Forest Management Activities 2008-2016 (2017 pending)

Objectives	Specific Prescription of Activity with quantifiable measurement (e.g. metres of trail, hectares thinned)		Year Accom-plished	Comments
	Description of Activity	Quantifiable Measure		
All	Forest Management Activity Review	1 review	annual	Annual review
All	Recruit local volunteers	+400 volunteers	2008-16	Tree planting, clean-up & trail maintenance, citizen scientists, assist with school-age students, misc.
All	Hire a forester on retainer or a service as required basis	----	as required	No harvesting activities occurred. Consulted with RPF as required for tree plant, etc.
Financial Sustainable	Continue to investigate other sources of revenues to cover costs associated with MFTIP	lease/rental agreements	2008-16 annual	New leases & ad hoc rentals Continue to participate in MFTIP for financial stability.
Financial Sustainable	Annual Forest Operating Report (includes, budget, past year forest activities, planned next year activities)	1 report	Annual	Approved by Board each year
Education Community-Communications Recreation, Environment	Fire, EMS, Police safety plan	1 report	ongoing	Involved with City SSM Emergency Response Plan for flooding
Education, Research Community-Communications	Develop a plan for inventory requirements with Sault College Forestry students	2 agreements	in progress	MOU being developed with Sault College & Algoma University
Watershed Protection Environment Community-Communications Education-Research	Protection forest values map. Identifying all past research plot trials, significant cultural heritage, wildlife, vegetation, recreation values, etc. Limit most activity to trails & designated areas, leaving majority of area undisturbed for watershed protection, natural regeneration, wildlife habitat protection	GIS data ongoing	in progress ongoing	ongoing addition to GIS data base
Recreation	Development of the recreational plan for SSMRCA Properties and should include: hazard trail inspections, trail head maps, etc.	data base	ongoing	Activities summaries into MFTIP activities.

Table 6 (cont'): Section 9 - ALL Properties - Report of Past Forest Management Activities 2008-2016 (2017 pending)

Objectives	Specific Prescription of Activity with quantifiable measurement (e.g. metres of trail, hectares thinned)		Year Accom-plished	Comments
	Description of Activity	Quantifiable Measure		
Community-Communications Education	Create a brochure for each accessible property	2 new, 1 existing, 1 in progress	ongoing	SSMRCA web site is maintained with general information, recreational opportunities, natural features and educational resources.
	Maintain forested property activity highlights on website	---	ongoing	Website has general MFP information and MFP posted, does not include listing of specific forestry activities .
		---	annual	Participation with a booth at Home & Outdoor Show.
Education, Research Communication & Community Wildlife, Environment	Develop plan to update wildlife inventory with Sault College Natural Resource students &/or Sault Naturalists. Complete wildlife inventory & ensure management practices enhance wildlife habitat (K.I.S.S.)	inventories	ongoing	Part of MOU with Sault College & Algoma University
Recreation Communication & Community	Developing user group/volunteer liability permission form that defines responsibility of parties involved for all active participation groups on CA lands.	1 form	2008-9	This will also provide a formatted track record of accurate activities.
Recreation	Develop a trail hazard inspection program with protocol for removing hazards once identified.	----	ongoing	Staff walk/inspect ongoing. User reported issues inspected.
		----	ongoing	Trail maintenance, cleaning, brushing, monitoring for & remove of hazardous trees, access roads brushed & repaired, trail markers, maps & 'No motorized vehicle' signage installation, maintenance; public access area (parking lots, washrooms, beach, etc,) maintained
Recreation Communication & Community	Enhance SSMRCA RMAC for plan implementation	FMC	2016	Revised/updated objectives developed for 2018-27 MFP renewal.
Communication & Community	Update terms of reference for RMAC	1 document	2016	RMAC evolved into FMC.
Recreation Communication & Community	Hold minimum bi-annual meetings with RMAC	2 meetings	2008	Meetings during 2008-16 MFP preparation
Environment Watershed Protection Recreation	Water crossing and culvert location (GPS) and maintenance program. A simple rating system can be designed with DFO.	<5 culverts 2 bridges	ongoing	Monitor and repair as required - follow Fisheries and Oceans regulations
All	Landowner Report OFA 1st 5-year activities	1 report	2012	Submitted to MNRF (change over from OFA)

9.1 5-Year Management Forest Plan Activity Review & Submission

As required with the MFTIP 10-year renewal period, SSMRCA is required to submit a 5-year forest management activity records to the MNRF (MFTIP) to show that appropriate record keeping and implementation are being carried out appropriately.

9.2 Annual Work Plan

A recommended Table has been placed in Appendix D as a potential Annual Work Plan for the use of the SSMRCA in order to implement the annual reoccurring activities. This Work Plan combined with the Annual Report provides annual documentation of plan vs actual physical forest management activities facilitating the development of an ongoing summary.

9.3 Annual Reporting

An Annual Report will be submitted to the Board of the SSMRCA in a consistent and accurate fashion over the next 10-year period. These will be completed before December 31 of each year and presented at the first SSMRCS Board meeting at the beginning of each fiscal year. They will include at least the following components:

- Introduction
- Forest Management Activities
    - Forest Inventory
    - Tree Marking
    - Monitoring of Harvest Operations
    - Timber Sales
    - Maintenance Activities
    - Forest Management Planning
- Annual Forest Budget
    - January 1st Forest Reserve Account
    - Management Fees
    - Expenditures
    - Avoided Expenditures (MFTIP related)
    - Revenues
    - Dec 31st Forest Reserve Account
- Proposed Forest Management Activities each fiscal year (January 1 to December 31) Include in-kind activities and staff time

10.0 Contacts and Notes

Contacts and notes must be reported also during this planning period for auditing purposes and to implement the Managed Forest Plan in an organized fashion. A regularly updated (monthly) log will be kept inside the report of forest activities binder.

Name	***Organization***		***Contact Info.***
Laing Bennett R.P.F.	Algoma-Manitoulin Forestry Services	Plan Author	705-945-8625
Brent Attwell R.P.F.	Regen Forestry	Tree Marking, MFP Inventory and other forestry services	705-253-2591
Administration	MFTIP	MFP enquiries	705-755-3222

Subsection - Hiawatha Highlands (HH) Specifics

HH 3.0 General Property History

HH 3.1 Description of Management Property History

The property is comprised of two large blocks, the NE Block of just over 715 ha and the SW block with just over 140 ha. The SW block and the southern portion of the NE block is mainly gently rolling silty sands with some flat outwash plains composed mainly of sandy soils. The northern portion of the NE block is very hilly with rock outcrops and a number of small water bodies. Soils range from deep silty loams to coarse sands over bedrock. The southern half contains the majority of remnant white pine stands with the remaining forest comprised mainly of tolerant hardwoods, dominated by sugar maple.

HH 3.1.1 Natural and Cultural History

Bedrock uplands of the pre-Cambrian Shield dominate the northern half of site terminating in a dramatic escarpment that rises as much as 30 metres above the surrounding area. Surface glacial deposits on the bedrock are light whereas the southern portions are covered by an outwash delta composed of granular and sandy deposits of great depth. Seven terrace levels resulting from the receding glacial lakes are evident with Crystal Creek cutting deeply through the terraces.

Records indicate the property had a series of owners prior to the Conservation Authority, who most likely logged the properties over time to sell the high quality veneer and sawlogs. Some homesteading probably occurred in the SW portion. The SSMRCA purchased 281 hectares (694 acres) in 1974 for the area originally known as the Crystal Creek Conservation Area. In 1975, an additional 32 ha. (80 acre) parcel was purchased south of this parcel on the east side of Crystal Creek. In 1976, 28 ha. (68 acres) were added on Landslide Road. The final 600 ha. (1482 acres) was purchased in December 1990.

As a partner in Sault Trails and Recreation, the Conservation Authority lands were utilized in conjunction with neighbouring properties to carry out recreational and educational events or activities such as: a community ski program open to the general public; cross country ski lessons for local school classes; Sault Finnish Nordic Ski Club's "jackrabbit program" to teach young club members to ski; Ontario Club ski competitions; and, snowshoeing.

Organized groups such as Girl Guides and Scouts Canada periodically use the sugar bush for outdoor excursions based from the Sugar Shack Facility. Scouts Canada and Army Cadets also utilize the Thayer Acres group campsite for outdoor

activities. Sault College and local high schools and elementary schools frequently use the Hiawatha Highlands as an outdoor classroom.

HH 3.1.2 History of Forest Operations

The property has been logged on an infrequent basis for well over a hundred years. The white and red pine would have been removed in the late 1800's resulting in the conversion to the tolerant hardwood forest that predominates now. The white pine that does remain may have been too young at the time or inaccessible due to rough terrain or of poor form at the time of harvest. In the early 1950's the property was logged again, this time for yellow birch veneer and oak, white pine and maple sawlogs. Around this time, red pine was planted on some of the cleared outwash plains in the SW section.

As a result of the recommendations made in the 1998 MFP, the Conservation Authority embarked on various forest management activities in the Hiawatha Highlands Conservation Area. In 2005, a review was undertaken to assess progress and make recommendations for improvements for consideration in a future MFP.

As a result of the recommendations made in the 1998 MFP the red pine plantation was marked by a certified tree marker and thinning took place over the next three years by CA staff (1998-2000). A total of 97,062 fbm of red pine and 3,020 fbm of hardwood were removed. The 2005 Review noted an excellent job using careful logging practices with regards to this work in the red pine plantation.

Between 1998-2001, the predominantly hard maple forest of the SE block was marked for improvement cutting and to enhance the growth and production of the primary species. Harvest activities were carried out by CA staff as time and conditions allowed. In the summer of 2001 clover and 55 trees were planted on landings to help regeneration efforts. In 2001 marking (by a certified tree marker) on the central portion of the NE block was undertaken with harvesting carried out by CA staff.

The CA managed and operated a sugar bush and sugar shack as an education and demonstration program for several years in the SW section of the Hiawatha Highlands. In 2002, the sugar bush was marked by a certified tree marker for a stand improvement cut. Harvesting was undertaken by CA staff. In addition, the competing undergrowth was removed from the sugar bush through the use of a grubbing machine.

For many years, the production of maple syrup was demonstrated to school classes and the general public at the sugar shack facility. These demonstrations exemplified the pioneer method of sap collection using buckets as well as sap

collection via a plastic pipeline system. Sap was boiled in a wood fired evaporator, finished off in a gas fired finishing plant, filtered, graded and packaged in various sized containers. Maple candies were also produced from the syrup. The syrup and candies were available for sale and the revenue from these products was used to offset the expenses of providing the demonstrations.

By 2004, the evaporator and storage tanks were in need of costly repairs. Unfortunately, without the necessary funds available, the maple syrup demonstrations were discontinued.

The recommendation of the 1998 MFP for stands in the central area of the Hiawatha east block, north of Connor Road, was for a stand improvement cut to remove poor quality maple. These sites were reconsidered in 2003 resulting in an amendment to the MFP. The amendment, prepared by an MNR sanctioned Managed Forest Tax Incentive Plan Approver provided prescriptions with regards to the removal of some mature and over mature tolerant hardwoods and some mature white pine and spruce. CA staff commenced carrying out the recommendations contained in the amended plan as weather and conditions permitted. The 2005 Review indicated concerns with the prescriptions included in MFP amendment. Items were also raised in regards to the harvesting activities, such as higher than desirable residual damage in a few areas, some of which may be attributed to the extremely rough terrain.

Over the four-year harvest 315,999 fbm of oak, maple yellow birch, white pine and white spruce were removed and 1,752 cords of firewood. It should be noted that prior to the amendment the operations had a much larger softwood component. In the Hiawatha Highlands, a total of approximately 168 ha were harvested since 1998. With the exception of trees deemed hazardous to the public or SSMRCA staff no harvesting prescriptions were undertaken during the 10 year period 2008-2017.

HH 3.2 Importance of Property to the Surrounding Landscape

The Voyageur Trail passes through the southern portion of the NE block, and is enjoyed by hikers. The Sault Trailblazers' OFSC snowmobile trail transects the north-eastern block of Hiawatha Highlands to provide a link to connect Sault Ste. Marie to the Algoma trail system to the north. The Hiawatha Highlands property sustains an integral component of the cross-country ski trail system that intertwines with neighbouring properties.

The northern half of the property forms the height-of-land and headwaters for the Crystal Creek water system.

HH 3.2.1 General Conditions, Flora and Fauna

Flora varies directly with the topography, soils and history of disturbance in the area. The northern half of the NE block has bedrock outcrops from the Pre-Cambrian Shield, with glacial tills. The terrain then flattens across the central portion the results of a post-glacial outwash delta composed of granular and sand deposits of great depth. It ends with a dramatic escarpment that falls abruptly as much as 30 metres on the southern edge. Seven terrace levels, eroded into these deposits as the glacial lakes recede, are evident in this area. The flats of these terraces have been deeply incised by Crystal Creek and its tributaries.

The southern (and south-eastern) portions of the property, is gently rolling with some flat plains. Soils are thin to deep silty sands with sand gravel found in pockets throughout.

The diversity of the Hiawatha Highlands, including the wetland, supports habitat for a variety of wildlife.

HH 3.2.2 Wetlands

The northeast section of the property contains many wetland areas, especially along the drainage channels emanating from two large lakes and a number of ponds, all flowing south into Crystal Creek. There is one small lake on the western side of the property with a large part of Crystal Lake in the north central area and Mabel Lake in the northeast. Crystal Creek and its tributaries is the predominant wetland feature. Along the shorelines marshes, alder and cedar swales, as well as mature forest where it cuts through bedrock areas.

The wetland serves important hydrological and biological functions as well as supporting a variety of flora and fauna.

HH 3.2.3 Roads and Trails

Fifth Line and Landslide Road transect the properties. Connor Road, which was used as a logging road prior to the SSMRCA the Hiawatha Highlands property also crosses the northeastern portion of the conservation area, however it must be noted that the portion of Connor Road owned by the SSMRCA was closed to vehicular traffic as per a Court Order in 1995. A gate was installed to help control motorized access into the property. There are several old logging roads that branch off Connor Road that is now used by recreational visitors. The Voyageur Trail and the OFSC snowmobile trail cross the property as well. There are also trails used for hiking, skiing and snow shoeing that meander through the property going to various lakes and other adjacent properties.

HH 4.0 Property Location Maps

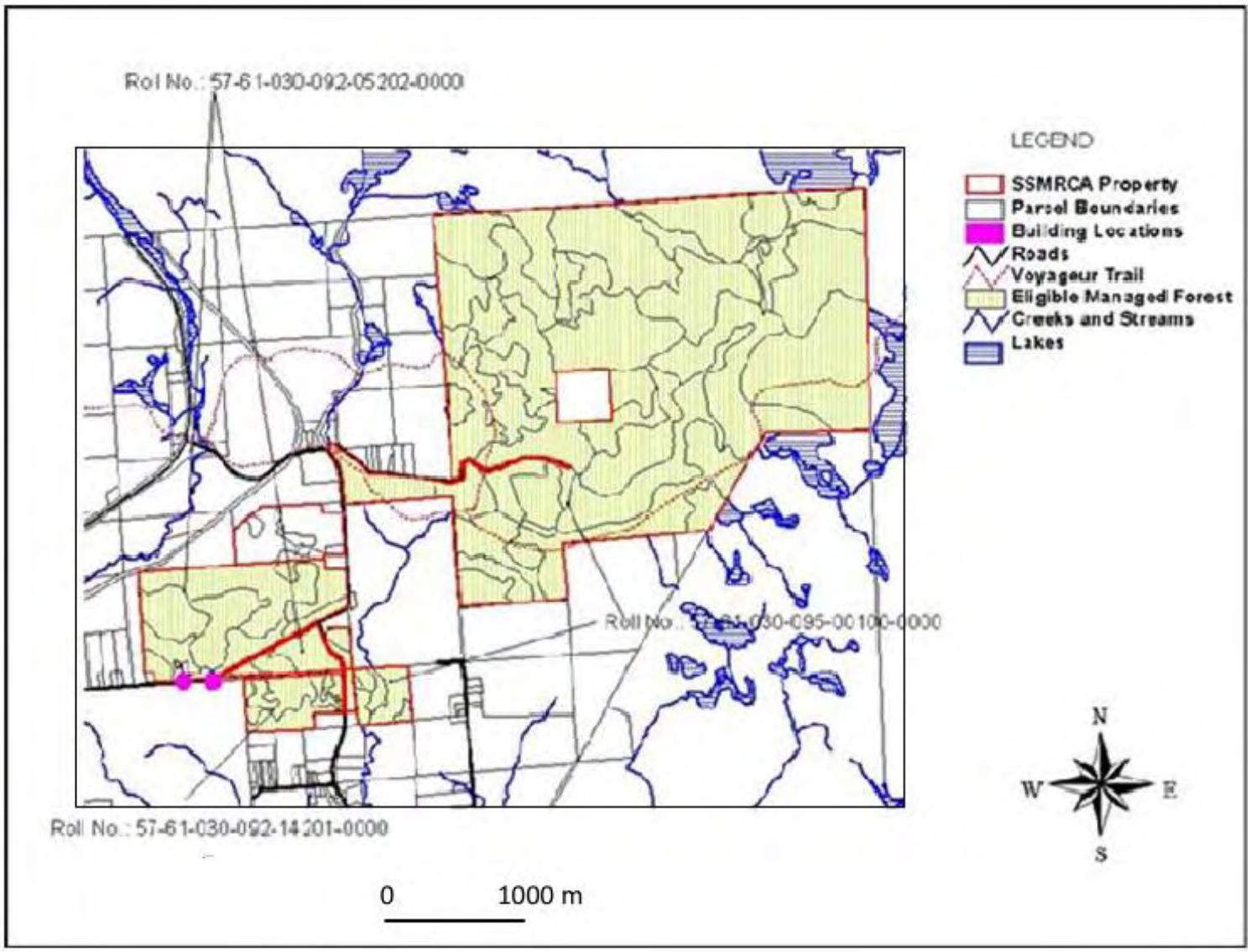

Figure 2: Property Location Map - Hiawatha Highlands

HH 6.0 Managed Forest Compartments

HH 6.1 Managed Forest Compartments Maps

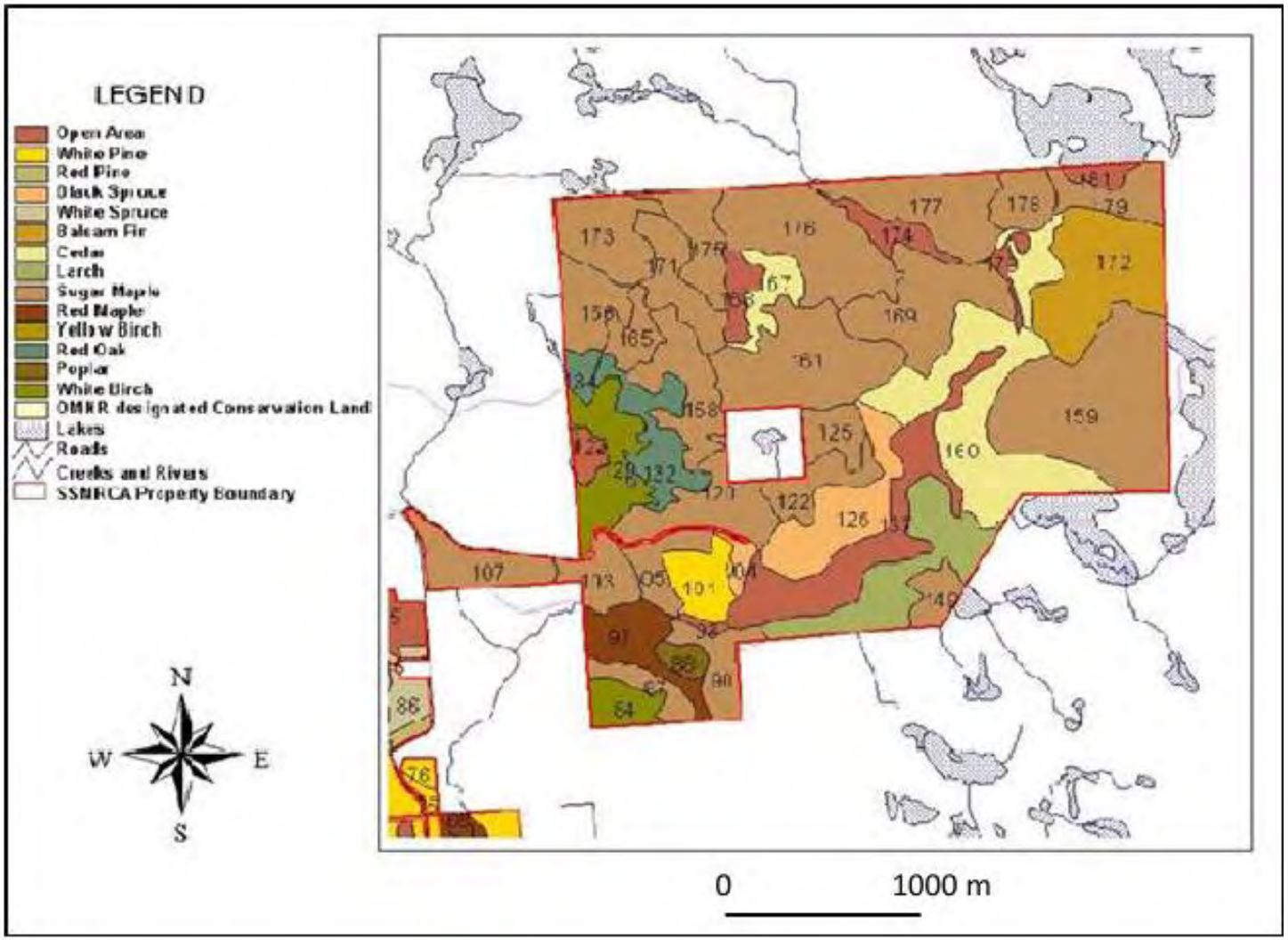

Figure 3: Managed Forest Compartments Map - Hiawatha East

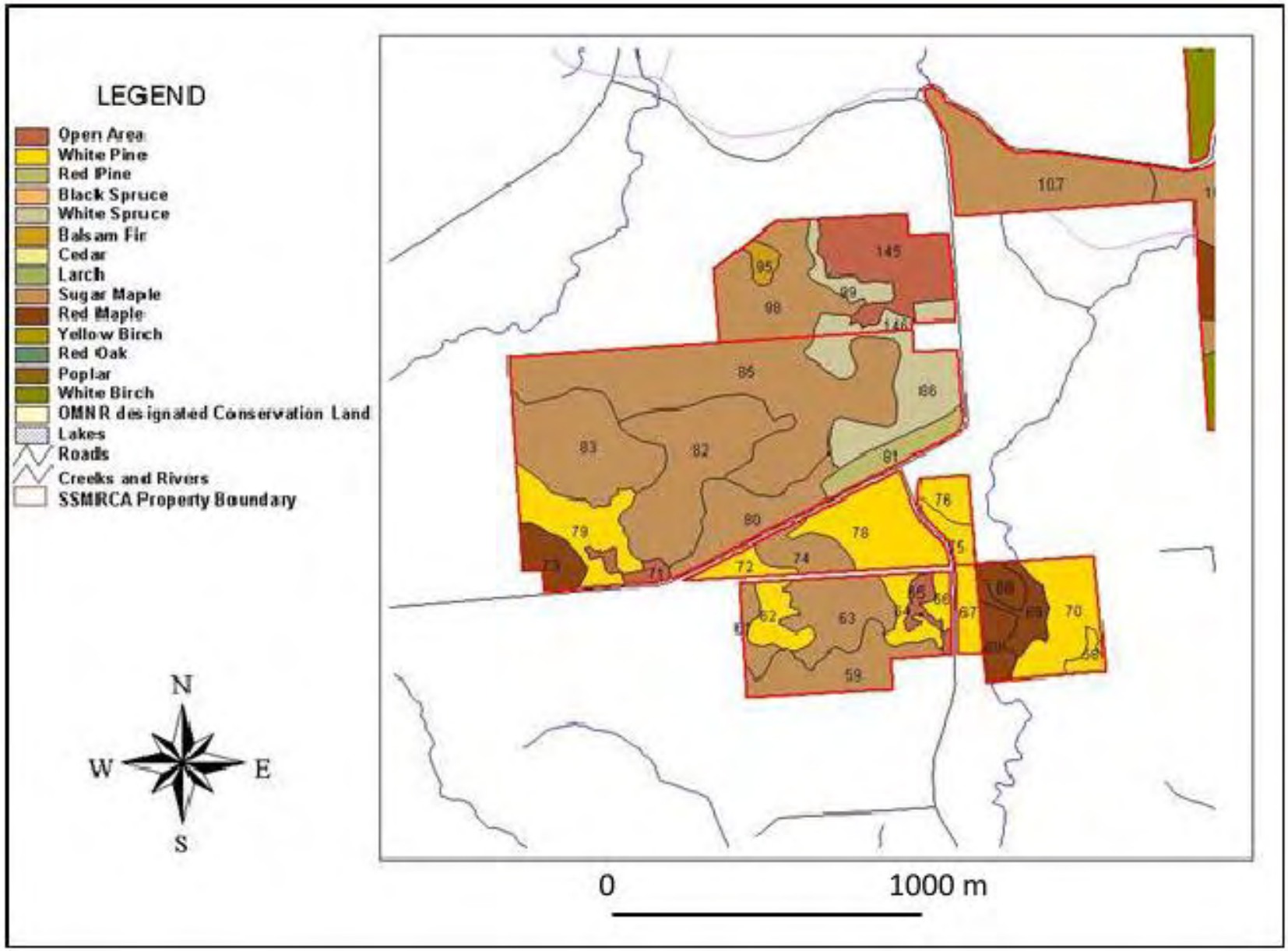

Figure 4: Managed Forest Compartments Map - Hiawatha <u>West</u>

HH 6.2 Summary of Managed Forest Compartments

Table 7: Eligible Managed Forest Compartments Areas Summary - Hiawatha Highlands

Roll: 5 7 6 1 0 3 0 0 9 2 0 5 2 0 2 0 0 0 0

Compartment	Status	Area in Acres
71	ia	3.61
72	emf	4.68
73	emf	8.30
74	emf	8.96
78	emf	23.38
79	emf	19.03
80	emf	19.19
81	emf	9.76
82	emf	40.53
83	emf	33.94
85	emf	78.15
86	emf	25.47
75	emf	3.94
76	emf	5.44
Total		**284.38**

emf - Eligible Managed Forest
npeoa - Non-Productive Eligible Open Area
peoa - Productive Eligible Open Area
ia - Ineligible Area
cl - Conservation Land

2 buildings at the office

Roll: 5 7 6 1 0 3 0 0 9 2 1 4 2 0 1 0 0 0 0

Compartment	Status	Area in Acres
59	emf	18.89
61	emf	4.93
62	emf	7.43
63	emf	18.79
64	emf	5.70
66	emf	3.20
67	emf	5.33
65	peoa	3.73
Total		**68.00**

no buildings

Table 7: Eligible Managed Forest Compartments Areas Summary - Hiawatha (Cont'd)

Roll: 5 7 6 1 0 3 0 0 9 5 0 0 1 0 0 0 0 0 0

Compartment	Status	Area in Acres
84	emf	20.27
87	emf	17.47
88	emf	9.57
90	emf	27.41
93	npeoa	3.66
97	emf	38.16
101	emf	28.98
103	emf	25.54
104	emf	6.57
105	emf	21.92
107	emf	36.46
120	emf	48.82
122	emf	26.89
123	npeoa	8.90
125	emf	21.10
126	emf	61.49
129	emf	49.55
132	emf	43.99
134	emf	9.62
137	npeoa	90.05
149	emf	16.36
158	emf	48.23
159	emf	152.82
161	emf	94.41
165	emf	19.07
166	emf	32.85
167	emf	22.61
168	npeoa	15.33
169	emf	73.48
170	npeoa	7.75
171	emf	37.13
172	emf	91.70
173	emf	47.86
174	npeoa	17.30
175	emf	32.92
176	emf	88.58
177	emf	61.56
178	emf	22.96
181	npeoa	8.61
160	emf	200.28
179	emf	48.84
58	emf	2.71
60	emf	6.18
68	emf	4.11
69	emf	7.38
70	emf	19.12
Total		**1776.57**

emf - Eligible Managed Forest
npeoa - Non-Productive Eligible Open Area
peoa - Productive Eligible Open Area
ia - Ineligible Area
cl - Conservation Land

no buildings

HH 7.0 Managed Forest Compartments Description

HH 7.4 Forest Compartments Inventory

Table 8: Managed Forest Compartments Descriptions - Hiawatha Highlands West

Comp. Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
58	emf	1	1930	17.0	0.6	2	PW 3 BW 2 PO 2 BY 1 MS 1 SW 1	ES20.1	na	1997
59	emf	22	1958	13.0	0.8	1	MH 4 OR 3 BW 2 PW 1	ES25.1	na	1997
60	emf	24	1925	21.0	0.9	X	MS 3 MH 2 BY 1 OR 1 PO 1 PW 1 SW 1	ES29.1	na	1997
61	emf	22	1951	15.0	1.2	1	MH 3 PW 2 SW 1 OR 1 BW 1 B 1 MS 1	ES27.1	na	1997
62	emf	1	1930	16.0	0.7	2	PW 5 SW 3 B 1 MH 1	ES20.1	na	1997
63	emf	22	1951	15.0	1.2	1	MH 3 PW 2 SW 1 OR 1 BW 1 B 1 MS 1	ES27.1	na	1997
64	emf	1	1930	16.0	0.7	2	PW 5 SW 3 B 1 MH 1	ES20.1	na	1997
65	peoa	na	na	na	na	na	Open area	na	na	2007
66	emf	1	1930	17.0	0.6	2	PW 3 BW 2 PO 2 BY 1 MS 1 SW 1	ES20.1	na	1997
67	emf	1	1930	17.0	0.6	2	PW 3 BW 2 PO 2 BY 1 MS 1 SW 1	ES20.1	na	1997
68	emf	24	1925	21.0	0.9	X	MS 3 MH 2 BY 1 OR 1 PO 1 PW 1 SW 1	ES29.1	na	1997
69	emf	24	1925	21.0	0.9	X	MS 3 MH 2 BY 1 OR 1 PO 1 PW 1 SW 1	ES29.1	na	1997
70	emf	1	1930	17.0	0.6	2	PW 3 BW 2 PO 2 BY 1 MS 1 SW 1	ES20.1	na	1997
72	emf	1	1930	16.0	0.7	2	PW 5 SW 3 B 1 MH 1	ES20.1	na	1997
73	emf	24	1945	14.0	1.0	1	MS 4 OR 3 MH 2 BY 1	ES23.2	na	1997
74	emf	22	1950	14.0	1.0	1	MH 5 MS 2 B 1OR 1 PW 1	ES29.1	13.6	2005
75	emf	1	1930	17.0	0.6	2	PW 3 BW 2 PO 2 BY 1 MS 1 SW 1	ES20.1	na	1997
76	emf	1	2007	0.0	1.0	2	PW3 PR3 PJ 3	na	na	2007
78	emf	1	1930	16.0	0.7	2	PW 5 SW 3 B 1 MH 1	ES20.1	na	1997
79	emf	1	1946	12.0	0.7	2	PW 5 SW 3 MH 1 B 1	ES20.1	na	1997
80	emf	22	1911	17.0	0.7	2	MH 7 PW 1 MS 1 B 1	ES29.1	na	1997
81	emf	4	1939	27.0	1.0	X	PR 0	ES12.1	32.6	2017
82	emf	22	1911	17.0	0.7	2	MH 7 PW 1 MS 1 B 1	ES29.1	17.1	2005
83	emf	22	1895	21.0	0.8	2	MH 8 PW 2	ES29.1	na	1997
85	emf	22	1895	21.0	0.8	2	MH 8 PW 2	ES29.1	17.5	2005
86	emf	12	1949	16.0	0.7	X	SW 5 PW 3 MH 1 B 1	ES17.1	na	1997
95	emf	13	1970	8.0	0.7	X	B 5 SW 3 BW 1 PO 1	ES18.2	na	1997
98	emf	22	1895	21.0	0.8	2	MH 8 PW 2	ES29.1	na	1997

Table 8: Managed Forest Compartments Descriptions - Hiawatha Highlands West (Cont'd)

Comp. Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
99	emf	12	1949	16.0	0.7	X	SW 5 PW 3 MH 1 B 1	ES17.1	na	1997
145	ia	0	0	0.0	0.0	na	Farm rental area	na	na	1997
146	emf	12	1949	16.0	0.7	X	SW 5 PW 3 MH 1 B 1	ES17.1	na	1997

Table 9: Managed Forest Compartments Descriptions - Hiawatha Highlands East

Comp. Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
84	emf	36	1960	13.0	1.0	1	BW 4 MH 2 B 1 MS 1 PW 1 SW 1	na	na	1997
87	emf	22	1960	13.0	1.0	X	MH 6 MS 2 B 1 OR 1	ES29.1	na	1997
88	emf	33	0	0.0	0.0	2	PO 0	ES17.1	na	1997
90	emf	22	1935	17.0	0.7	1	BY 2 MH 2 MS 2 B 1 BW 1 HE 1 PW 1	ES28.1	na	1997
93	npeoa	0	0	0.0	0.0	na	creek	na	na	2007
97	emf	24	1945	14.0	1.0	1	MS 4 MH 2 BW 1 BY 1 PW 1 SW 1	ES29.1	na	1997
101	emf	1	1927	13.0	0.5	3	PW 4 SW 4 B 1 MH 1	ES11.2	na	1997
103	emf	1	1938	17.0	0.9	1	PW 6 MH 4	ES20.2	27.7	2017
104	emf	11	1899	19.0	0.9	X	SB 5 CE 3 L 1 BW 1	ES31	na	1997
105	emf	22	1908	19.0	0.7	2	MH 8 PW 2	ES29.1	16.9	2005
107	emf	22	1935	21.0	0.8	2	MH 5 PW 5	na	28	2017
120	emf	22	1945	14.0	0.9	1	MH 4 OR 3 BY 1 MS 1 PW 1	ES29.1	17.5	2005
122	emf	22	1895	18.0	0.7	2	MH 4 OR 2 B 1 BY 1 HE 1 MS 1	na	na	1997
123	npeoa	0	0	0.0	0.0	na	lake	na	na	2007
125	emf	22	1928	18.0	0.8	1	MH 9 BY 1	ES25.2	20.0	2005
126	emf	11	1899	19.0	0.9	X	SB 5 CE 3 L 1 BW 1	ES31	na	1997
129	emf	36	1950	14.0	0.8	2	BW 4 PW 3 BY 1 MS 1 SW 1	ES20.2	na	1997
132	emf	28	1935	15.0	0.9	2	OR 4 MS 2 B 1 BW 1 MH 1 SW 1	ES23.2	15.6	2005
134	emf	28	1935	15.0	0.9	2	OR 4 MS 2 B 1 BW 1 MH 1 SW 1	ES23.2	na	1997
137	npeoa	0	0	0.0	0.0	na	creek	na	na	2007
149	emf	22	1875	20.0	0.9	2	BY 3 MH 3 MS 2 B 1 OR 1	ES29.1	na	1997
158	emf	22	1935	17.0	0.9	1	MH 5 BY 2 B 1 OR 1 SB 1	ES29.1	13.2	2005
159	emf	22	1945	19.0	1.0	1	MH 6 OR 3 BY 1	ES25.2	27.7	2017

Table 9: Managed Forest Compartments Descriptions - Hiawatha Highlands East (Cont'd)

Comp. Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
161	emf	22	1930	17.0	0.8	1	MH 3 BY 2 MS 2 B 1 OR 1 PW 1	ES29.1	17.3	2005
165	emf	22	1920	19.0	1.0	1	MH 4 OR 2 BW 1 BY 1 MS 1 PO 1	na	na	1997
166	emf	22	1920	19.0	1.0	1	MH 4 OR 2 BW 1 BY 1 MS 1 PO 1	ES29.1	na	1997
168	npeoa	0	0	0.0	0.0	na	lake	na	na	2007
169	emf	22	1911	21.0	0.7	X	MH 9 BY 1	ES29.1	14.1	2005
170	npeoa	0	0	0.0	0.0	na	Creek and fen	na	na	2007
171	emf	22	1935	17.0	0.9	1	MH 5 BY 2 B 1 OR 1 SB 1	ES29.1	na	1997
172	emf	22	1923	21.0	0.7	X	MH 8 BY 2	ES29.2	24.4	2017
173	emf	22	1905	21.0	0.9	1	MH 5 MS 2 B 1 BY 1 OR 1	ES29.1	na	1997
174	npeoa	0	0	0.0	0.0	na	lake	na	na	2007
175	emf	22	1930	17.0	0.8	1	MH 3 BY 2 MS 2 B 1 OR 1 PW 1	ES29.1	15.7	2005
176	emf	22	1930	17.0	0.8	1	MH 3 BY 2 MS 2 B 1 OR 1 PW 1	ES29.1	na	1997
177	emf	22	1875	23.0	0.7	1	MH 4 BY 3 HE 2 B 1	ES28.1	na	1997
178	emf	22	1911	21.0	0.7	X	MH 7 BY 2 MS 1	ES29.1	25.2	2017
181	npeoa	0	0	0.0	0.0	na	lake	na	na	2007
160	emf	17	1945	11.0	0.9	1	L 0	ES31	na	1997
179	emf	22	0	0.0	0.0	----	MH 4 BY 3 HE 2 B 1	----	na	1997
167	emf	17	1945	11.0	0.9	1	L 0	ES31	na	1997

HH 7.7 Wildlife Species Noted

Table 10: Significant Wildlife Habitat Features - Hiawatha Highlands

Property	General Location	Significant Wildlife Feature	Importance
Hiawatha	Western Block NE corner	Forest Edge along cleared area	Open space and transition zone to mature forest important songbird habitat
	Western Blocks	Mixed tolerant hardwood forest	Generally provides good habitat for small mammals such as skunk, rabbit and rodents. As well a variety of avian species would make use of the forest type, including pileated woodpeckers.
	Ponds and lakes in Eastern Portion	Waterfowl and beaver	A wide range of water bodies will support a number of duck species and other waterfowl, including heron.
	South central and south eastern	Large wetland	A wide range age classes and species occupy this lowland area and provide both cover and food for deer, moose, and other mammals. As well it would support a healthy avian population
	Western, central and SE	Tolerant hardwood forest	Recent harvesting will provide new food source for moose and deer.
Wildlife Species Noted	Beaver, porcupine, moose, deer, black bear, other common small mammals and birds.		

HH 8.0 Forest Management Activities 2018-2027 (10 Yrs)

Table 11: Section 8 - Forest Management Activities 2018-2027 - Hiawatha Highlands

Comp. Number	Objectives *(In no particular order)*	Specific Prescription of Activity with quantifiable measurement (e.g. metres of trail constructed, trees planted, hectares thinned)		Year Scheduled	Comments
		Description of Activity	Quantifiable Measure		
81, 159, 172, 177, 178, 179	Education, Financial Stability, Environment, Forest Health, Wildlife	Develop and implement silvicultural prescriptions for selection, uniform shelterwood harvesting on stands to improve forest health	approx. 300 acres	2018-2023	Use certified tree markers and R.P.F with appropriate qualifications to implement contractors. See Appendix B for Guidelines
84, 87, 88, 90, 97, 173	Financial Stability, Environment, Education, Community, Forest Health	Inventory and PHSP for recommended areas from last 10-year plan Forest Inventory of northern and western boundaries of Hiawatha East	approx. 200 acres	2018-2020	Partnership with SC if possible. PHSP*, if recommended to amendment stage in Section 5.3
All	Recreation, Community	Maintain and enhance, ski and other hiking trails	20km +-	2018-2027	Work with appropriate user groups
103, 107	Communications, Education, Environment, Wildlife Habitat, Forest Health	Establish Demonstration Forest site for White Pine silviculture in cooperation with Sault College and local consultant Plant White Pine seedlings grown by Sault College to ensure regeneration	1 site 1 sign 50 acres 5,000 seedlings	2020 2021-2025	Need to encourage visitation and educational awareness and develop appropriate communication tools such as descriptive signage advertising. First year field camp students
Hiawatha East	Environmental, Watershed Protection, Financial Stability, Forest Health	Using high visibility & durable product, mark or remark property boundary to prevent trespass on Southern, Eastern and Northern boundaries	4.8 km	2018, 2023	Active logging in the area requires highly visible boundaries. Use UV stable pink or red flagging tape and/or paint .Boundary maintenance required every 5 yrs.

Notes: Many activities for this property are common to ALL SSMRCA properties and can be found in Table 4 in Section 8.1

* PHSP- Pre Harvest Silvicultural Prescription

HH 9.0 Report Forest Management Activities 2008-2017 (10 yrs)

Table 12: Section 9a - Report of Past Forest Management Area Activities 2008-2016 (2017 pending) - Hiawatha Highlands

Comp. Number	Objectives	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, trees planted, hectares thinned)		Year Accomplished
		Description of Activity	Quantifiable Measure	
82	Education, Community Self Sustainable	• Maple syrup demonstration. Reopen perhaps on a lesser scale • J.M.Longyear for blowdown red pine as pulp wood	N/A **$600**	Equip issues 2008
159, 172-3, 177-8	Self Sustainable Community, Education, Environment	• Inventory and PHSP for recommended areas from last 10-year plan Forest Inventory of northern and western boundaries of Hiawatha East • Collect forest inventory data to verify MNR ortho photos	~400 ac. 12 plots	--- 2014
All	Recreation	• Maintain and enhance Voyageur, ski and other hiking trails • Sault Bicycle Club volunteers establish a single track mountain bike trail • Sault Cycling Club, Kinsmen Club, MNRF, SSMRCA Land Use Agreements for network of mountain bike trails – 3 Trailhead Kiosks installed	20km +- 1 trail 1 agreement	ongoing 2008-9 2016
All	Environment	• Gate and lock maintenance	5 gates	ongoing
All	Recreation	• Maintain recreational parking lots	2 lots	ongoing
TBD 61-3, 72, 74, 120, 132, 158, 165	Communications Education, Environment Wildlife Habitat	• Establish Demonstration Forest sites for different types of silviculture in cooperation with OMNR and NRCan • Mapping updated to better depict trails, boundaries, natural features • Field visit previously thinned area • Dr. J Foote, AU, list of student projects, publications, conference presentations from research within Hiawatha Highlands	4 sites data 3 visits 1 report	--- 2008-12 2007 2016
All	Self Sustainable	• Ground Hemlock Harvesting	NRCan specs	2008
Hiawatha East	Environmental, Watershed Protection	• Property boundary marking to prevent trespass on Southern, Eastern and Northern boundaries	4.8 km	2007
59, 63, 75-6	Environmental, Watershed Protection	• Scouts/Guides/college student/TD Environmental Club/OWA/staff tree planting on erosion prone Landslide hill site by **~250 volunteers** • Seeding grass & clover on erosion prone Landslide hill site	+4,500 trees ~2 ac.	2007, 2009, 2011-16 2009

Table 13: Section 9b - Report of Past Forest Management Area User Activities 2008-2016 (2017 pending) - Hiawatha Highlands

Objectives	Activity	
	User Group	**Volunteers /Attendees**
Enhance Community Involvement and Communications **Environment** **Financial Stability** **Recreation** **Social, Cultural, Educational (Research)**	**Educational Institutes** • Sault College Natural Environment Outdoor Studies Program: - 9-day long Fall Field Camp - Parks & Rec Students snowshoeing - Parks & Rec Students host outdoors skills for local high school students - Parks & Rec Students overnight camping trip - trial forest plot data collection for Silvicultural assignment (50 trees) - tour & staff presentation to Parks & Rec Students Re: CA's mandate & role - tree planting - Forestry students comparison red pine thinned twice vs. unthinned (MNR property) - GIS project – record contours of Crystal Creek streambed - high school dual credit fire pump training • Superior Heights Outdoor Class: - annual maple syrup production by Outdoor Class - demonstrate sap collection & serve to kindergarten students - tour forest management areas & local geology formations & streams - harvest Canada yew as fund raiser - conduction canoe lessons - volunteer maintenance camping area • Instruction for creation of pre-school learning program 'Forest School' • ADSB Environmental Class outdoor classroom – outdoor skills, respect for natural environment • APH - passive tick surveillance to monitor population in North America **General Public** • very heavy recreational use of trails by general public year round • Marsh Monitoring Program lending library (CD/portable player - bird, amphibian surveys) • 45th anniversary celebration – interactive displays, e.g., hands on forest growth & yield plot measurements – in co-operation with Sault college & MNR (OFRI) • Local Francophone Assoc. 2 day pancake breakfast with traditional music/customs • Kiwanis Community Pancake Breakfast fundraiser over 4-6 weekend period • Clean North volunteers garbage cleanup • **Rental fee** for outdoor weddings performed in CA areas • Independent Film makers location **rental** • Algoma Trappers Assoc. pancake fundraiser **rental** of facilities • Communities in Bloom judges tour of Managed Forest **Recreational Groups** • Hayden Adventure Base Camp – high school students outdoor rec program • Sault North Archery Club leased area **$700/yr** (area excluded from MFTIP) • Sault North Archery Club 2-day Provincial competition	 annual ~140 students 25 students **20 volunteers**/40 students 20 students annual ~20 students annual ~20 students 15 students 25 students 2 students annual ~20 students 2008-14 ~20 students 100 students 40 students 25 students 25 students **20 volunteers** 20 participants 20 students **2 volunteers** ongoing ongoing 200 participants annual ~300 attendees annual ~2500 attendees **30 volunteers** **ad hoc rental fee** **ad hoc rental fee** **rental** ~50 attendees 12 Participants 20 students 1-2x/wk **lease** ~ 60 members 50 participants

Table 13 (cont') Section 9.0b - Report of Past Forest Management Area User Activities 2008-2016 (2017 pending) - Hiawatha Highlands

Objectives	Activity	
	User Group	**Volunteers /Attendees**
Enhance Community Involvement and Communications **Environment** **Financial Stability** **Recreation** **Social, Cultural, Educational (Research)**	**Recreational Groups (cont')** • Sault Cycling Club - 1-wk long lessons on single track mountain bike trail • Sault Cycling Club - bicycle cyclocross • Soo Finish Nordic Ski Club **leased** trail network - cross country (10 yr avg) : - season passes & 5 packs - day passes - snowshoe passes (5 yr avg) • Soo Finish Nordic Ski Club annual summer trail trot fundraiser • Algoma University Provincial Cross Country Championship • Sault Trailblazers Snowmobile Club – OFCS trail through portion of area • ABSB Cross Country running mini meets & city championship • Voyageur Trail Club – **rent** CA facilities to instruct how to conduct/lead organized hike • Sault Naturalist joint project bird viewing platform • Association with Trails Ontario **Youth Groups** • Scouts, Cubs, Sparks, Rovers, Girl Guides - winter games camp out – use of snowshoes & classroom - use of facilities & overnight camping out - volunteer tree planting & maintenance camping area • Jr Cadets of 49th Regiment spring exercises & volunteer maintenance camping area • YMCA summer camp **Government / Industry** • NRCan - foliage collection of all tree species for pharmaceutical potential study • MNR - showcasing area forestry practices (red pine thinning & sugar maple improvement cut) & local history • Trees Ontario workshop for private land owners • MNR (OFRI) Ecological Land Classification 3-day course • Clergue FM - forest based Health & Safety Training • (MNR) Youth Rangers work experience • Staff hosted/lead hike activity for NRCan conference • NRCan harvest of striped maple for Asian long-horn beetle study • Local Police Services exercise staged at sawmill site • Invasive Species Centre: - collect soil samples to assess for dog strangling-vine threat - Open House – education general public invasive species **Other** • Hosted Northern Conservation Authorities Conference	annual ~20 participants 1x/wk ~80 participants **Lease** annual ~1,184 participants annual ~1,537 participants annual ~335 participants annual ~150 participants ~100 participants annual winter use +100 participants **rental** 1x/yr ~20 participants ongoing ongoing All season use ~50 participants annual 20 participants 1 event 2x - 40 participants 20 participants 20 participants 30 participants 15 participants 40 participants 1 event 50 participants 2 biologists 50 attendees 12 participants

Subsection - Fort Creek (FC) Specifics

FC 3.0 General Property History

FC 3.1 Description of Management Property History

Fort Creek was the main catalyst that led to the formation of the SSMRCA in 1963. The area appears to have been logged extensively in the early 20th century. The north-western portion of the property once supported a sugar bush. The SSMRCA acquired the land in 1965 and began construction of a major flood control structure in the 1967.

FC 3.1.1 Natural and Cultural History

Fort Creek is at the southern extremity of the Algonquin Terrace, formed by glacial Lake Algonquin during the Wisconsin Ice Age. The dam was built at a natural drop in elevation known as the Korah Bench. Since that time Fort Creek and its tributaries have eroded into the clay and sand plains to a depth of 12 metres creating deep ravines between a number of plateaus in this small area.

The area supported a number of small farms and a sugar bush in the early years of Sault Ste. Marie.

FC 3.1.2 History of Forest Operations

A small sugar bush was located on the NW portion of the property. It would appear that, due to the present age class of the bush, that the mature trees were harvested at the conclusion of the operation probably in the 1970's. Some tree planting around the cleared dam site has been undertaken with the help of schools and scouts in the past twenty years. Tree marking and removal of hazard trees has been undertaken in the past five years.

FC 3.2 Importance of Property to the Surrounding Landscape

The Fort Creek Forest is almost completely surrounded by residential and commercial development and is well used for hiking and general recreation. The forested area serves as headwater protection for the Fort Creek reservoir.

FC 3.2.1 General Conditions, Flora and Fauna

The area is broken up into a number of distinct forest and vegetation types due in part to topography and to past disturbances on the land base. The creek and associated wetland running down the centre of the property includes a range of

wetland types and species. The forest, especially on the south-western side is mainly stunted poplar, oak and red maple which may reflect the effects of the soil resulting from the digging of the channel for the flood control. Disease is prevalent. The southern forest is mainly sugar maple, with most of the mature trees gone, while the eastern portion is predominately poplar and oak with some deep ravines. The south-eastern block is partially cleared, but the species and growth of the new forest appears stunted.

FC 3.3.2 Wetlands

Fort Creek conservation area is a main flood control reservoir for the City of Sault Ste. Marie. The reservoir is 0.8 km. long and 60metres+ in width. There are a number of creeks and wetlands to the north that feed the reservoir.

FC 3.3.3 Roads and Trails

There are over six kms. of marked trails that are used extensively for hiking as well as nature viewing, bird watching, orienteering and various types of winter recreation. It is recommended that further tree marking and periodic removal of hazardous trees should be undertaken.

FC 4.0 Property Location Maps

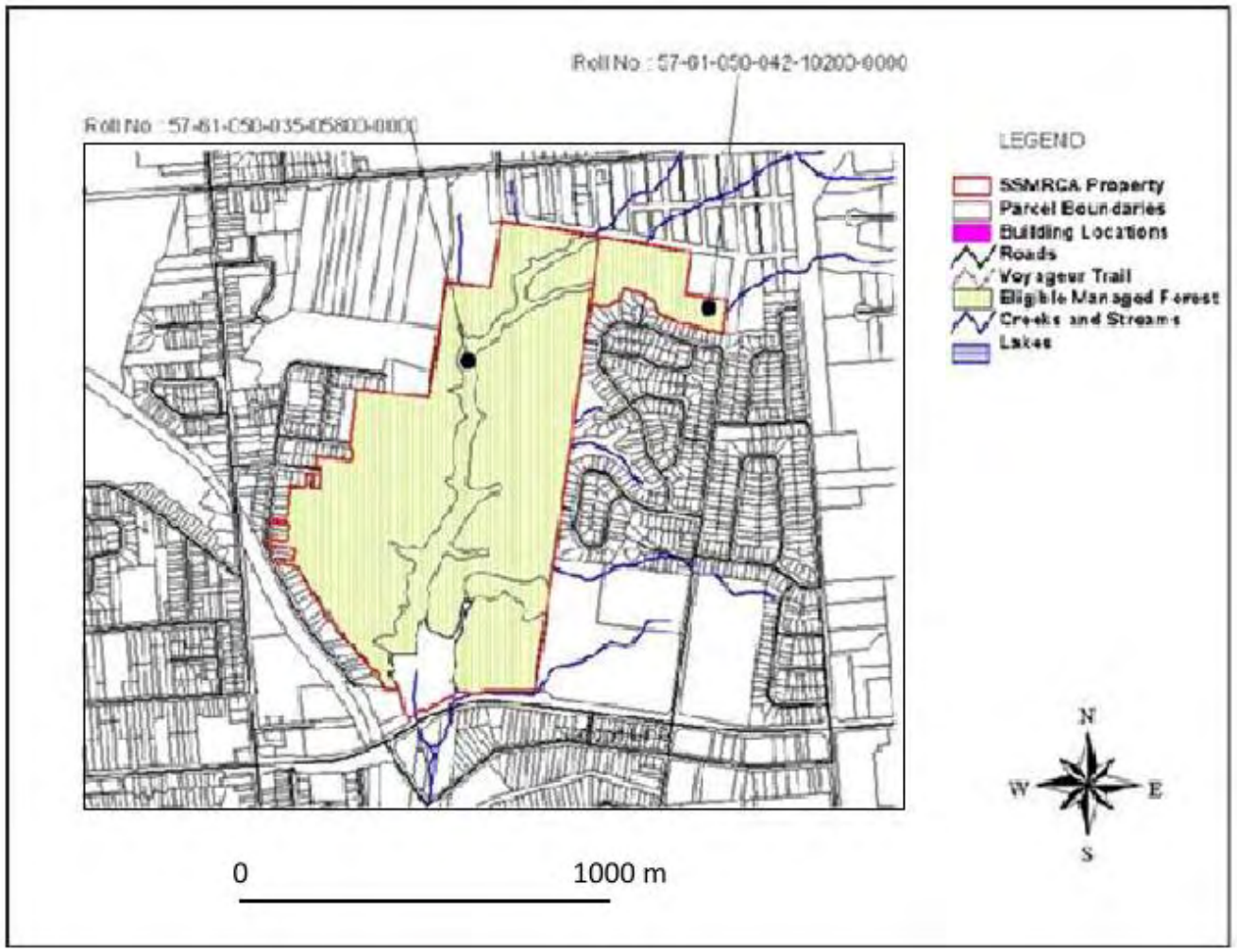

Figure 5: Property Location Map - Fort Creek

FC 6.0 Managed Forest Compartments

FC 6.1 Managed Forest Compartments Maps

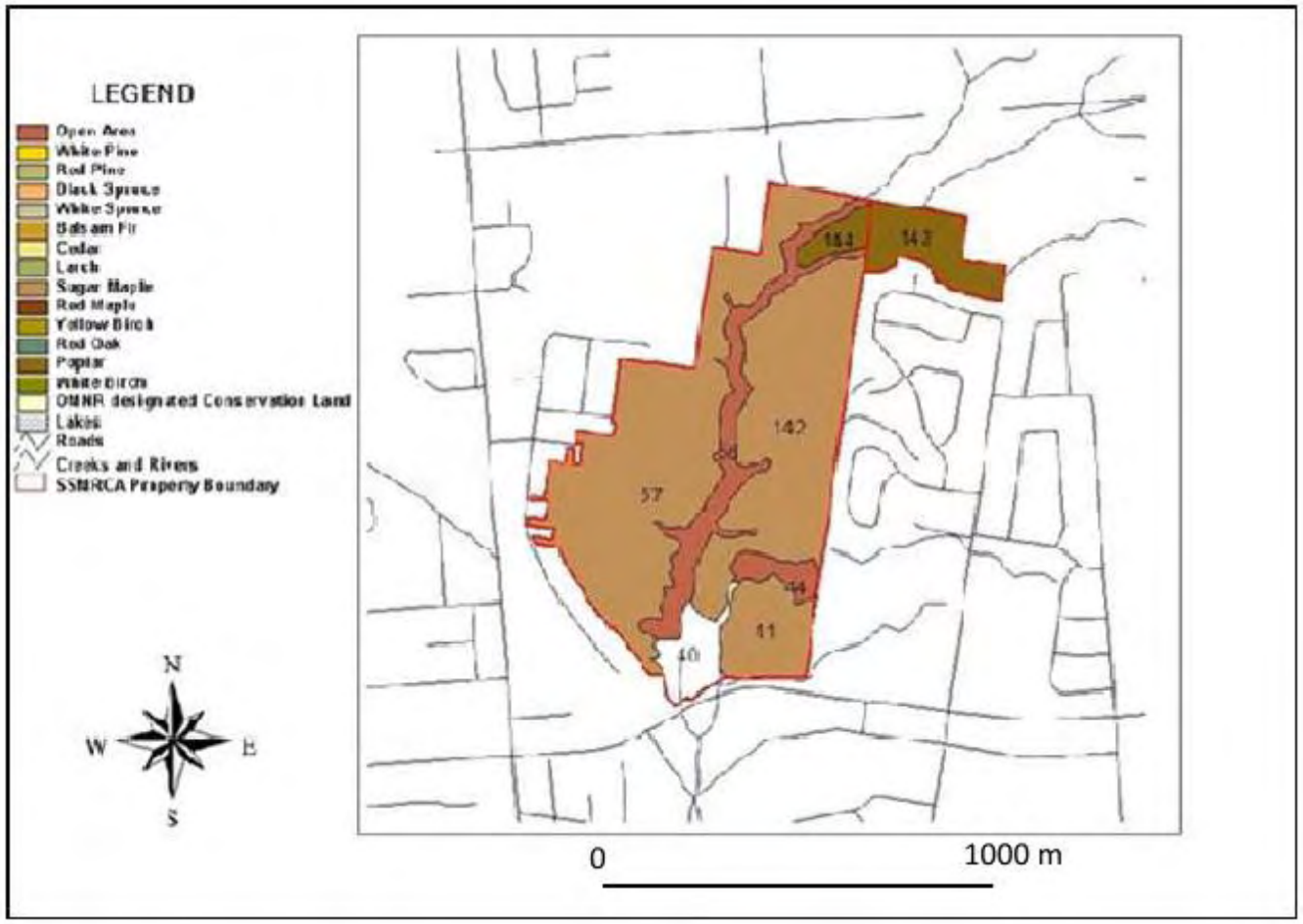

Figure 6: Managed Forest Compartments Map - Fort Creek

FC 6.2 Summary of Managed Forest Compartments

Table 14: Eligible Managed Forest Compartments Area Summary - Fort Creek

Roll: | 5 | 7 | 6 | 1 | 0 | 5 | 0 | 0 | 3 | 5 | 0 | 5 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |

Compartment	Status	Area in Acres
40	ia	*8.06*
41	emf	14.09
44	peoa	4.16
56	npeoa	19.20
57	emf	72.18
142	emf	54.53
144	emf	4.13
Total		**176.35**

emf - Eligible Managed Forest
npeoa - Non-Productive Eligible Open Area
peoa - Productive Eligible Open Area
ia - Ineligible Area
cl - Conservation Land

1 old forest building in 57

Roll: | 5 | 7 | 6 | 1 | 0 | 5 | 0 | 0 | 4 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |

Compartment	Status	Area in Acres
150	emf	14.51
Total		**14.51**

FC 7.0 Managed Forest Compartments Descriptions

FC 7.4 Forest Compartments Inventory

Table 15: Managed Forest Compartments Descriptions - Fort Creek

Compartment Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
44	peoa	na	0	0.0	0.0	na	Open area		na	2007
41	emf	22	1925	18.0	1.0	2	MH 4 MS 3 BW 2 PO 1	ES29.2	na	1997
56	npeoa	0	0	0.0	0.0	na	Creek system/dam		na	2007
57	emf	22	1925	18.0	1.0	2	MH 4 MS 3 BW 2 PO 1	ES29.2	na	1997
142	emf	22	1925	18.0	1.0	2	MH 4 MS 3 BW 2 PO 1	ES29.2	na	1997
143	emf	33	1960	15.0	0.7	2	PO 4 B 2 MS 2 BW 1 SW 1		na	1997
144	emf	33	1960	15.0	0.7	2	PO 4 B 2 MS 2 BW 1 SW 1		na	1997

FC 7.7 Wildlife Species Noted

Table 16: Significant Wildlife Habitat Features - Fort Creek

Property	General Location	Significant Wildlife Feature	Importance
Fort Creek	Central corridor	Wetland	Dammed pond has waterfowl present and with many trails and users the area affords good viewing of a range of bird species, including ducks, geese and heron.
	Surrounding hardwood forest	Edge and transition with wetland	Excellent habitat for a wide range of bird species, with a range of age classes, open areas, deep valleys and wetlands provide diverse and important areas for all stages of development.
Wildlife Species Noted	Small mammals are common, bullheads (introduced) and turtles are associated with the reservoir. A mix of birds including ruffed grouse, woodpeckers, waterfowl, great blue herons and ravens. Native birds are yellow shafted flicker, red-winged black bird, black capped chickadee and the American robin. By the reservoir you may see cormorants and raccoons. Water inhabitants include minnows, catfish (non-native), painted and snapping turtles and leopard frogs.		

FC 8.0 Forest Management Activities 2018-2027 (10 Yrs)

Table 17: Section 8 - Forest Management Activities 2018-2027 - Fort Creek

Comp. Number	Objectives *(In no particular order)*	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, hectares thinned)		Year Scheduled	Comments
		Description of Activity	Quantifiable Measure		
All	Recreation	Providing a safe environment by removing hazardous trees that are marked	60+ trees	2018-Ongoing	A number of trees have been marked along the trail for removal as a result of their poor diseased condition
All	Recreation	Maintaining and enhancing the present trail system	5km+	Annual	This is a very popular recreational area and could provide the SSMRCA a unique opportunity to promote itself and its mandate.
All	Community, Environment, Wildlife	Update overstory and understory inventory	2 stands per year	2018-2021	Sault Naturalists could help with inventory and monitoring. 2% sample of area
144, 142	Recreation, Watershed, Protection	Trail water crossing repair	2 known crossings	2018-2022	Incorporate into maintenance schedule
Open Area	Environment, Watershed Protection	Ensure that the dam in properly maintained	1 dam	Ongoing	

Notes: Many activities for this property are common to ALL SSMRCA properties and can be found in Table 4 in Section 8.1

FC 9.0 Report Forest Management Activities 2008-2017 (10 yrs)

Table 18: Section 9a - Report of Past Forest Management Area Activities 2008-2016 (2017 pending) - Fort Creek

Comp. Number	Objectives	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, trees planted, hectares thinned)		Year Accomplished
		Description of Activity	Quantifiable Measure	
All	Recreation	• Providing a safe environment by removing hazardous trees that are marked • Maintaining and enhance present trail system • Enhance/expand trail system to connect Sault Finnish Rest Home & Superior Heights High School to Hub Trail	+60 trees 5km+ 1 trail	2012-3 annual 2013
All	Community, Environment Wildlife	• Update overstory and understory inventory • Sault Naturalists (**20 volunteers**) collect data on flora & fauna in future area of Hub Trail construction	2 stands/yr 1 report	---- 2007
142, 144	Recreation, Watershed Protection	• Trail water crossing repair	2 crossings	ongoing
Open Area	Environment, Watershed Protection	• Ensure that the dam is properly maintained • TD Environmental Club/Sault College/staff tree planting along Hub Trail & flood channel by **20 volunteers**	1 dam 70 trees	ongoing 2011

Table 19: Section 9b - Fort Creek - Report Forest Management Area User Activities 2008-2016 (2017 pending) - Fort Creek

Objectives	Activity	
	User Group	**Number of Events**
Enhance Community Involvement and Communications **Environment** **Financial Stability** **Recreation** **Social, Cultural, Educational (Research)**	**Educational Institutions** • Sault College Natural Environment Outdoor Studies Program - staff presentation RE: CA & hike with Parks & Rec Students - student volunteer to assist with Water Festival - Resort Operations Class - designs & replacing failing bridge – 2008 fall semester - Co-op student exposure to trail hazard monitoring - Forestry students - measure growth & yield plots - GIS co-op student designs project to record trails to hand held GPS - Co-opt students GPS trails - Outdoor Recreation students install colour coded trail markers - Dendrology course cumulative species identification testing • St. Francis School importance of Fort Creek dam in flood control, use of GPS units to locate geo caches • Water Festival - local Grades 3-6 students - history & use of water **General Public** • Very heavy recreational use of trails by general public year round • Staff hosted Canada Day 4 hr Hub Trail Festival • Sault Search & Rescue Technical Rope Rescue Team training from bridge • United Way's/Voyageur Trail Assoc. Christmas for Children toboggan/sliding party • Sault Finnish Rest Home fundraising event • Video - hiking a natural trail available through QR code on Hub Trail marks • French Catholic School Board volunteer shoreline cleanup event • Hosted 2015 inaugural BioBlitz biodiversity research • Healthy Hikes 'Mood' Walk for Canadian Mental Health Assoc. with Sault Naturalists Club • Local environmental group of TD Bank employees shoreline cleanup of reservoir • Church Group's Environmental Club – presentation of CA's role & hike **Recreational Groups** • Searchmont Area Freestyle Assoc. hosted Urban Sprawl Rail Jam at toboggan hill **Youth Groups** • Instruct & provide signage to Scout Troop to renew/replace signage & trail markers • YMCA Summer Camp study natural wetlands & ecosystems of area	annual ~25 students **1 volunteer** student weekly 12 students 1 student 20 students 1 student 2 students 20 students annual ~145 students 10 students annual/semi ~600 students ongoing annual 3-500 participants 15 participants 50 participants 50 participants **2 volunteers** **30 volunteers** +100 participants 20 participants **10 volunteers** 50 participants 30 participants 10 youth 15 youth

Subsection - Marks Bay (MB) Specifics

MB 3.0 General Property History

MB 3.1 Description of Management Property History

Ancient aboriginal campsites belonging to the Archaic Period of Archaeological history have been identified at locations along the shoreline of Marks Bay. Other than this and an area on the north shore where five homesteaders lived in the early 20th century, much of the area still contains remnants of the original natural forests. The sand beach along all of the shoreline of Marks Bay has been enjoyed by people as a recreational area for many years.

MB 3.1.1 Natural and Cultural History

As early as 1792, John Johnson described Pointe Aux Pins as "a sand bank of several miles…. covered with red and white pines" (Note 1945). In 1825, John Bigsby made the following observations: A tongue of land two and three quarters miles broad projects from the north shore at nearly six and a half miles from the upper store of the Hudson's Bay Company; forming a rather deep bay on its east side, (Marks Bay) which is used as a harbour for schooners. The southern portion of the property is still mainly composed of these now over mature conifer forests with a remnant stand of boreal jack pine (Pinus banksiana) and mixed stands of mainly white and red pine. The main disturbance feature of these forest types has been periodic natural fire, with over ten occurrences on the north shore and three on the south, (Dominy 1981) being documented since the last "stand replacing" fire over 250 years ago. Fires have resulted in a number of age classes being represented in the area. A low wet area divides this southern portion and the northern shoreline with its predominant mixed wood forest. This is interspersed with poorly drained areas containing a preponderance of hemlock, cedar and black spruce.

In the early 1700 and 1800's those traveling west across Lake Superior used Marks Bay as a "safe harbour". On August 10, 1894 the municipality of Sault Ste. Marie granted J.R. Marks the property for $24.62. German homesteaders occupied a number of lots in the NW corner of the bay in the early 1900's and since that time parts of the property have been owned by a number of private companies, the Province and individuals including the Lake Superior Paper Company, Abitibi Pulp and Paper and Trans Canada Pipelines. The bay itself and much of the shoreline is littered with thousands upon thousands of 8' pulp logs, evidence of its early use as a major water log storage facility. In 1972 the Province of Ontario purchased Marks Bay from Abitibi and designated it a public open space. In 1992 the Ministry

of Natural Resources completed a road and docking/ramp facility in the southwest corner of the bay to transport floatplanes to its hangar at the Sault Airport. The road has not been used for this purpose for over six years as all floatplanes were converted to amphibious landing gear. It remains gated. On March 30, 1994 the SSMRCA purchased Marks Bay from the Province.

MB 3.1.2 History of Forest Operations

The NW corner of Marks Bay was cleared in the early 20th century as a result of the establishment of a number of homesteads along this shoreline. The western end of the bay was logged between 1937 and 1940. Protection was afforded the mature pine forests on the southern shores of Marks Bay as a direct result of the acquisition and protection dictated by a cottage association know as the Syndicate, which had purchased the adjacent parcel in the early 1900's to afford a protective buffer around their waterfront dwellings.

The 1998 plan recommended a selective harvest within pine forest to "control an infestation of bark beetle" and "improve the health of the remaining stands". The area was marked in the fall of 1998 and the spring of 1999. Harvesting began in the late fall of 1998 and continued in 1999 and 2000. The final harvest cut was completed in 2002. In all a total of 195,055 fbm of white and red pine were removed by Conservation Authority staff. In total, approximately 19 ha were harvested over this period.

In 2005 a review of forest management activities was carried out to assess progress and make recommendations for future improvements. The review document is available upon request. This review found that the prescription and operations were carried out satisfactorily and made a number of recommendations for inclusion in the new MFP to ensure that adequate and suitable regeneration would occur.

MB 3.2 Importance of Property to the Surrounding Landscape

It cannot be underestimated as to the beauty and value of the sandy shoreline and adjacent lands of this invaluable piece of property. Sandy beaches, mature white and red pine stands, wetlands, mixed hardwood forest and old growth hemlock and cedar forests, provide habitat, protection, important green space and public access to the waterfront.

MB 3.2.1 General Conditions, Flora and Fauna

The present forests of Marks Bay are a complex mosaic of conifers and hardwoods reflecting the varied microclimate, topography, soils and logging and fire history. The south-eastern portion of the bay consists of extensive stands of red, jack and

white pine, while the south-eastern shoreline consists mainly of lowland cedar, hemlock and red maple. The western half has a central wetland area adjacent to the highway, with both the north and south reaches having a mixed forest of spruce, red maple, balsam fir, birch and oak.

There are noteworthy deeryards in the Marks Bay Conservation Area.

MB 3.2.2 Wetlands

The western and northern shore lands comprise a major drainage area for the surrounding landscapes with numerous springs and wet areas along most of this shoreline.

MB 3.2.3 Roads and Trails

Access to this area is limited to the public entrance to the Conservation Area on the eastern side of Airport Road.

MB 4.0 Property Location Maps

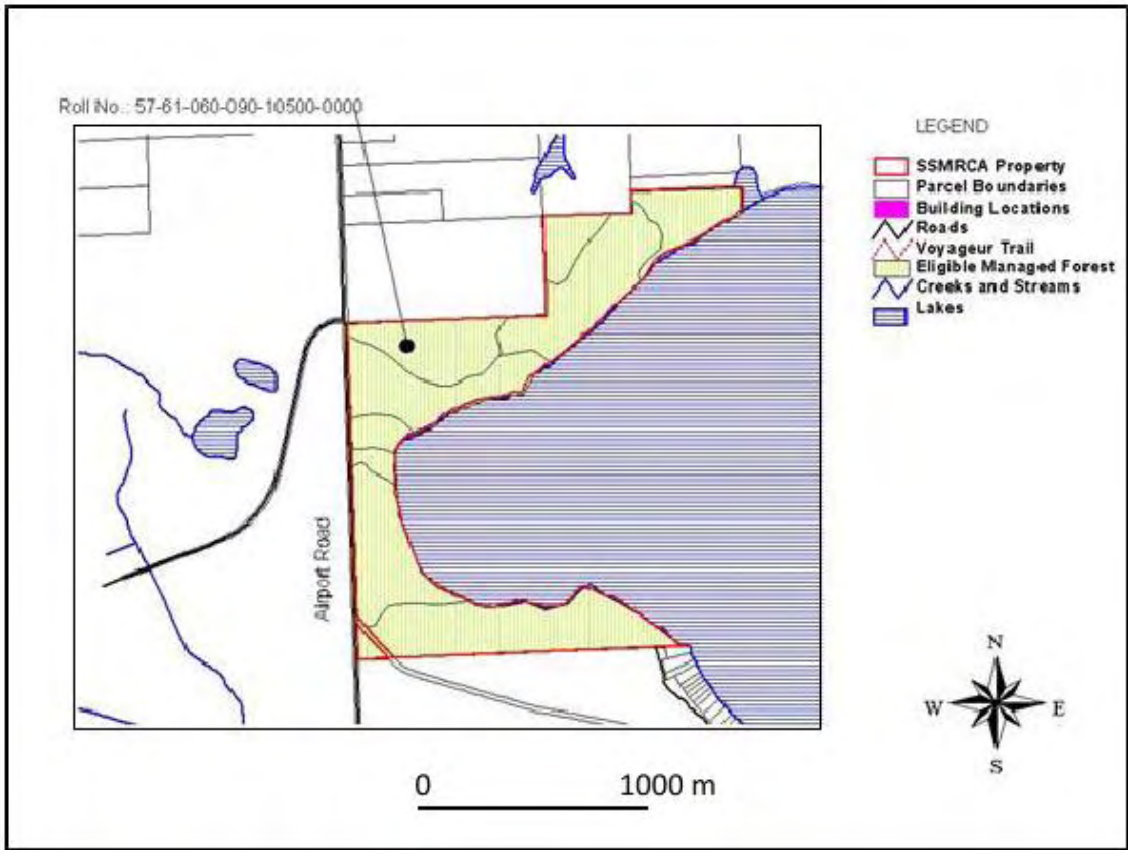

Figure 7: Property Location Map - Marks Bay

MB 6.0 Managed Forest Compartments

MB 6.1 Managed Forest Compartments Map

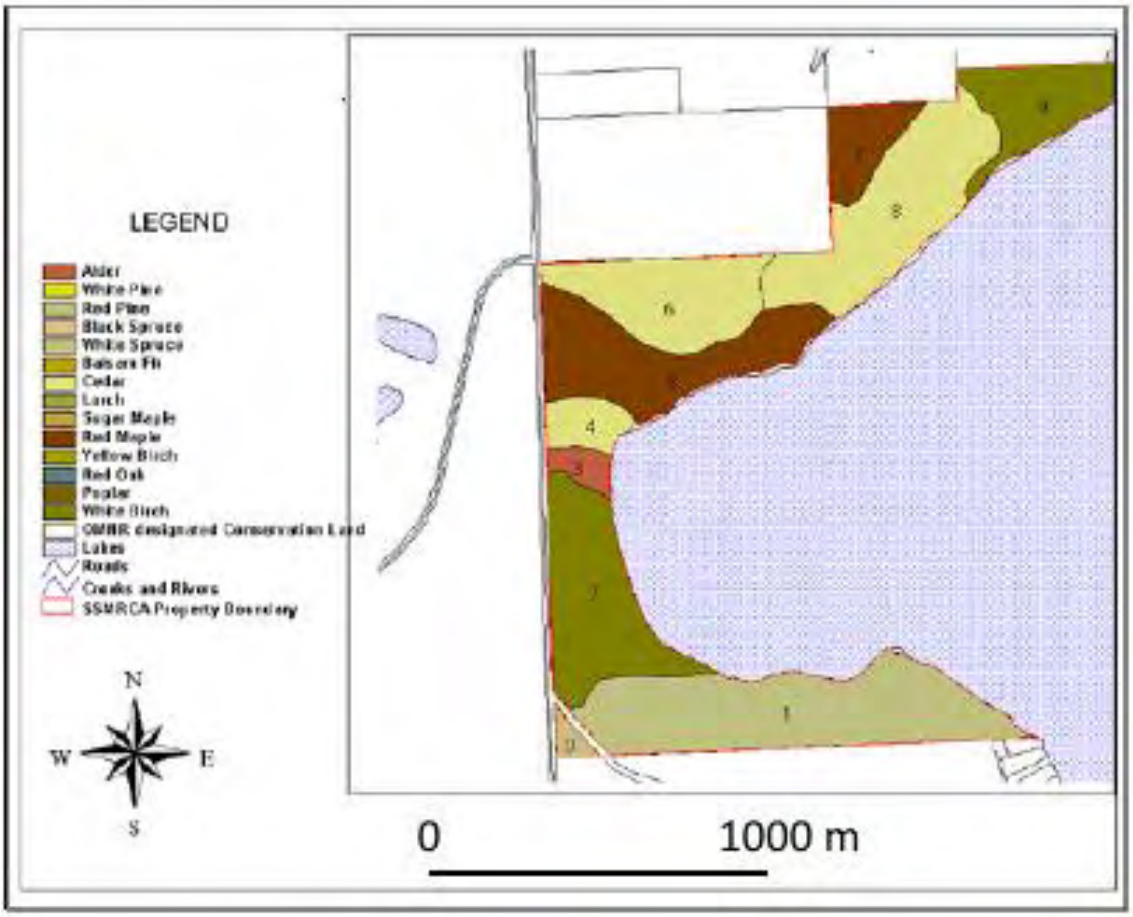

Figure 8: Managed Forest Compartments Map - Marks Bay

MB 6.2 Summary of Managed Forest Compartments

Table 20: Eligible Managed Forest Compartments Areas Summary - Marks Bay

Roll: | 5 | 7 | 6 | 1 | 0 | 6 | 0 | 0 | 9 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |

Compartment	Status	Area in Acres
0	emf	2.54
1	emf	62.04
2	emf	36.98
3	emf	4.44
4	emf	7.85
5	emf	37.51
6	emf	31.40
7	emf	12.15
8	emf	45.98
9	emf	20.91
Total		**261.80**

emf - Eligible Managed Forest
npeoa - Non-Productive Eligible Open Area
peoa - Productive Eligible Open Area
ia - Ineligible Area
cl - Conservation Land

No buildings

MB 7.0 Managed Forest Compartments Descriptions

MB 7.4 Forest Compartments Inventory

Table 21: Managed Forest Compartments Descriptions - Marks Bay

Comp. Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
0	emf	4	1843	23.0	0.8	2	PR 3 PJ 3 BW 2 B 1 PW 1	ES13.2	na	1997
1	emf	4	1843	28.0	0.6	1	PR 4 PW 1 BW 1 OR 1	ES13.2	18.5	2017
2	emf	36	1936	18.0	1.2	2	BW 4 MS 2 PO 1 B 1 OR 1 PR 1	ES17.2	na	1997
3	emf	Alder	0	3.0	0.0	4	Alder	na	na	2002
4	emf	17	1890	11.0	1.0	3	CE 7 BY 1 MS 1 B 1	ES34	na	1997
5	emf	24	1933	16.0	1.0	2	MS 5 B 3 BW 1 PO 1	ES18.2	na	1997
6	emf	17	1892	14.0	0.5	2	CE 6 SB 2 B 2	ES33	na	1997
7	emf	24	1934	18.0	1.3	1	MS 3 BW 2 B 2 OR 1 PO 1 SW 1	ES18.2	na	1997
8	emf	17	1867	15.0	1.1	2	CE 3 BY 2 HE 2 MS 2 B 1	ES34	na	1997
9	emf	36	1930	17.0	1.2	2	BW 4 PO 3 B 2 MS 1	ES18.2	na	1997

MB 7.7 Wildlife Species Noted

Table 22: Significant Wildlife Habitat Features - Marks Bay

Property	General Location	Significant Wildlife Feature	Importance
Marks Bay	South shore	Overmature Red and White Pine forest	Recent shelterwood cut has resulted in a preponderance of browse which the local deer herd will use. Porcupine, skunk and raccoons are often seen. Pileated woodpecker and many other avian species are present.
	West central	Alder and cedar wetland	A major travel corridor for the local deer herd. Moose also use the area. Large hawks are often seen using the area.
	Northeast	Mixed birch and conifer forest	Deer and moose travel through the area regularly. With clearings and adjacent wetland the area has a significant bird population.
	North west shore	Hemlock and cedar forest	Winter deer yard with mature cedar and hemlock providing excellent cover and the area is adjacent to a sizable wetland.
Wildlife Species Noted	Deer mainly, with other common small mammals such as red squirrel and birds. Moose and black bear are known to travel through the area.		

MB 8.0 Forest Management Activities 2018-2027 (10 Yrs)

Table 23: Section 8 - Forest Management Activities 2018-2027 - Marks Bay

Comp. Number	Objectives *(In no particular order)*	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, hectares thinned)		Year Scheduled	Comments
		Description of Activity	Quantifiable Measure		
1	Environment, Forest Health, Wildlife, Education	Set targets of white pine/ red oak regen. Then perform survey (2%). If below targets then: • Cleaning around existing Pw, Or and Sw to release	10 acres +-	2021 cruise 2022 start tending	Maintain conifer component for significant deer yard locally
All	Recreation, Community	Maintain and/or enhance the present trail system	3+-km	Annual	
All	Recreation	Maintain recreational privies and parking lot	1 set of privies	Seasonal bi-weekly	
All	Environment, Watershed Protection	Using high visibility, durable, product re-mark property boundary on Northern & Southern perimeters	3 kms.	2018 and 2023	Use UV stable pink or red flagging tape and/or paint Maintenance required every 5 yrs

Notes: Many activities for this property are common to ALL SSMRCA properties and can be found in Table 4 in Section 8.1

MB 9.0 Report Forest Management Activities 2008-2017 (10 yrs)

Table 24: Section 9a - Report of Past Forest Management Area Activities 2008-2016 (2017 pending) - Marks Bay

Comp. Number	Objectives	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, trees planted, hectares thinned)		Year Accomplished
		Description of Activity	Quantifiable Measure	
5,6	Research-Education Environment, Watershed	• Identify and confirm rare plants in area. GPS out locations for Protection Forest Values Map	1 page report	2009
1	Environment	• Set targets of white pine/ red oak regen. Then perform survey (2%). If below targets then: - Cleaning around existing Pw to release or - Site disturb and hand plant 200 stems/acre • Collection of unique jack pine seeds (storage at Ontario Seed Plant) to ensure availability for future tree plants • Collect forest inventory data to verify MNR ortho photos	~40 acres 8K seeds (~3kg) 3 plots	--- 2008 2014
All	Recreation, Community	• Maintain and enhance the present trail system • Lease agreement - new Mark's Bay Campground hiking trail to provide campers with leased access to water • Lay out coastal trail from parking/picnic area to eastern boundary • Trails GIS mapped by summer student Co-op Sault College placement	3+-km **annual lease** 1 trail data	ongoing commenced '08 2008 2009
All	Environment	• Gate and lock maintenance • Close 2 access points during winter season	2 gates 2 access pts	Bi-annual 2015-16
All	Recreation	• Maintain recreational privies and parking lot	1 set privies	ongoing
All	Environment, Watershed Protection	• Re-mark property boundary on Northern & Southern perimeters • Property boundary, trails, natural features mapping updated	3 kms. data	2007 2007

Table 25: Section 9b - Report of Past Forest Management Area User Activities 2008-2016 (2017 pending) - Marks Bay

Objectives	Activity	
	User Group	**# of Events/Attendees**
Enhance Community Involvement and Communications **Environment** **Financial Stability** **Recreation** **Social, Cultural, Educational (Research)**	**Educational Institutes** • **Sault college:** - Project presentations on planning studies - students carried out deer browse survey, recorded frequently used trails with GPS – data used to update wildlife inventory - work with student to lay out future trail - chainsaw safety course – removal dead/high risk trees - Fish & Wildlife students monitoring project set up using motion sensitive camera - soil sampling lab sessions - student hike & forestry activities **General Public** • Frequent recreational use of trails by general public year round • Geocaches located throughout, increasing continuously **Recreational Groups** • Participated in the Marsh Monitoring Program as lending library • staff lead hike with Sault Naturalists Club to locate skunk cabbage plant	 20 students 15 students 1 student 12 participants semester 20 students 25 students ongoing ongoing annual 2 events/**10 volunteers**

Subsection - Shore Ridges (SR) Specifics

SR 3.0 Property Management History

SR 3.1 General Description

As a result of evaluation of the Shore Ridges wetland designating it as a Provincially Significant wetland, in 2002 a major portion of the Shore Ridges Conservation Area was removed from the Managed Forest Tax Incentive Program (MFTIP) and transferred/converted to the Conservation Land Tax Program. This saw the majority of the wetland area converted to conservation land, while a mainly upland hardwood forest block of 40 ha at the south east end of the area, and, a mainly conifer lowland 35 ha block at the south west end (there is an additional 6 ha hardwood area which is at the base and on top of the ridge on the western approach), remained as eligible forest under MFTIP.

SR 3.1.1 Natural and Cultural History

The southeast block sits atop a 30 metre high escarpment formed thousands of years ago as part of glacial Lake Nipissing. As well at the northern end a small area sits atop the bluff, while the majority of the forested area is part of a series of wetland and beach ridges formed in conjunction with recession of glacial Lake Nipissing and the creation of Lake Superior.

Both these areas are transected by the Indian Ridge Trail, used by the Ojibwa to travel from their camp at Gros Cap to the Hudson Bay post in Sault Ste. Marie. Another trail, called the Beaver trail, travels along one of the main beach ridges transecting the conservation area. It was thought to be an important transportation corridor for early settlers and loggers.

SR 3.1.2 History of Forest Operations

None has been documented or known to occur other than some clearing and harvesting that may have occurred by early “homesteaders” who occupied much of the upland portion in the early twentieth century.

The Shore Ridges area has been managed for its environmental protection function and remains largely undisturbed to provide wildlife habitat as well as natural buffers for the wetland. The Conservation Authority has not conducted any harvesting activities on this property.

SR 3.2 Importance of Property to the Surrounding Landscape

These properties are highly significant in that they are all that remain of this unique landform (escarpment) and the associated wetlands and beach ridges offering public access. The forested areas adjacent to the wetlands provide a buffer by reducing the potential of erosion and sedimentation that could adversely affect the Provincially Significant wetland. Under the stewardship of the Conservation Authority, the Shore Ridges wetland has been classed as "Conservation Land" and managed for its environmental protection function.

SR 3.2.1 General Conditions, Flora and Fauna

The wetland and the adjacent forested areas support a diverse range of flora and fauna.

The northern-forested portion contains a large area of mature cedar and larch. The area has a very high water table. This provides an important ecosystem diversity to facilitate ingress and egress of wildlife species and nesting and foraging habitat.

SR 3.2.2 Wetlands

The Shore Ridges wetland is environmentally sensitive and significant. It plays an important hydrological and biological role. The wetland mitigates pollution by physically, chemically and biologically treating water. It is the home to a variety of plants and wildlife, with significant presence of waterfowl noted. The wetland also aids in flood attenuation.

SR 3.2.3 Roads and Trails

As mentioned above, an early and still evident trail extends from along the top of the escarpment in the south, and moving to the base at the junction of Walls Road, and continuing along the base where it continues on to Gros Cap and crosses another trail which heads back south to Sunnyside Beach. Hikers use both trails extensively. The Conservation Authority strongly discourages the unauthorized use of motorized vehicles in this area.

SR 4.0 Property Location Maps

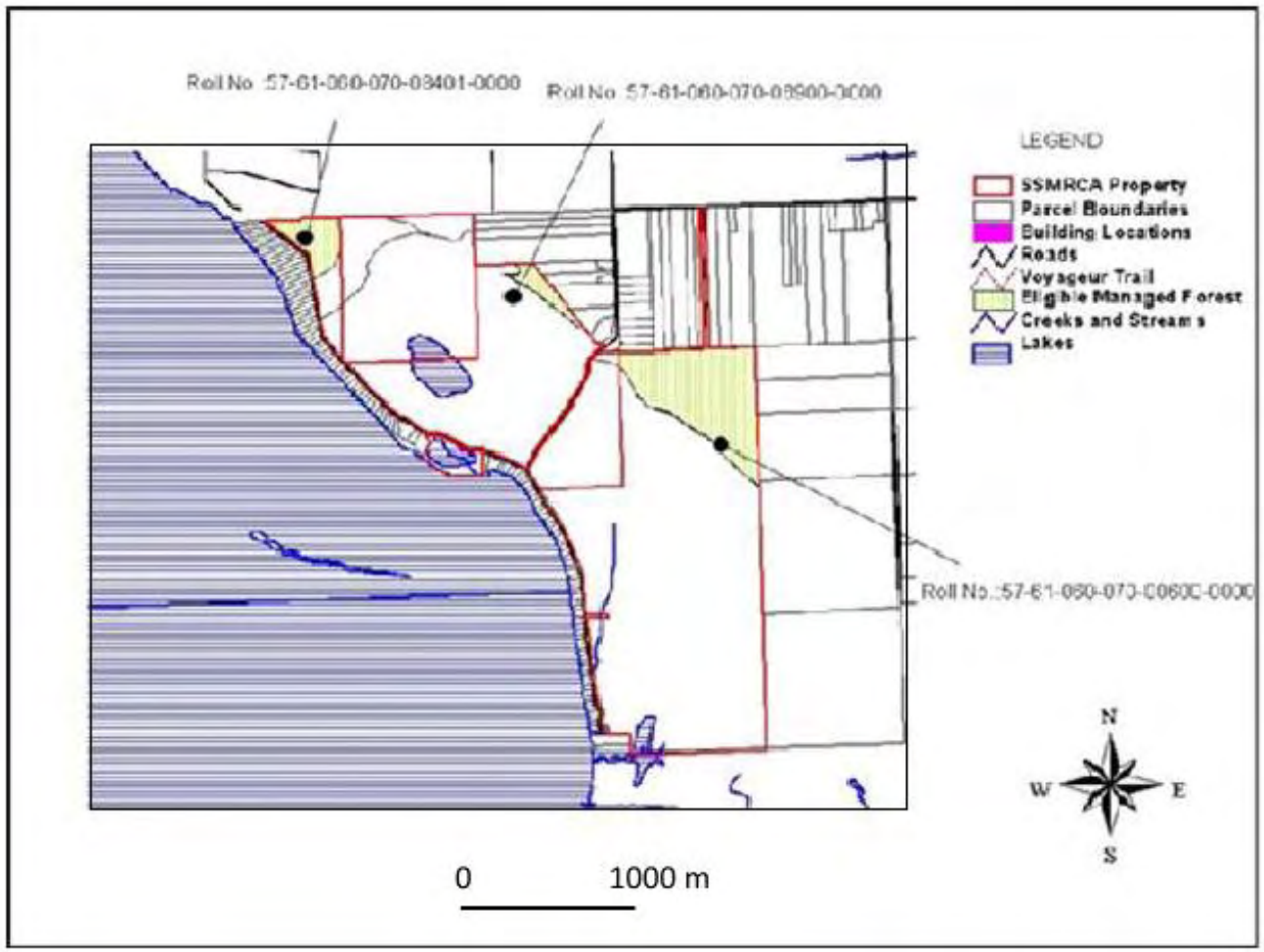

Figure 9: Property Location Map - Shore Ridges

SR 6.0 Managed Forest Compartments

SR 6.1 Managed Forest Compartments Maps

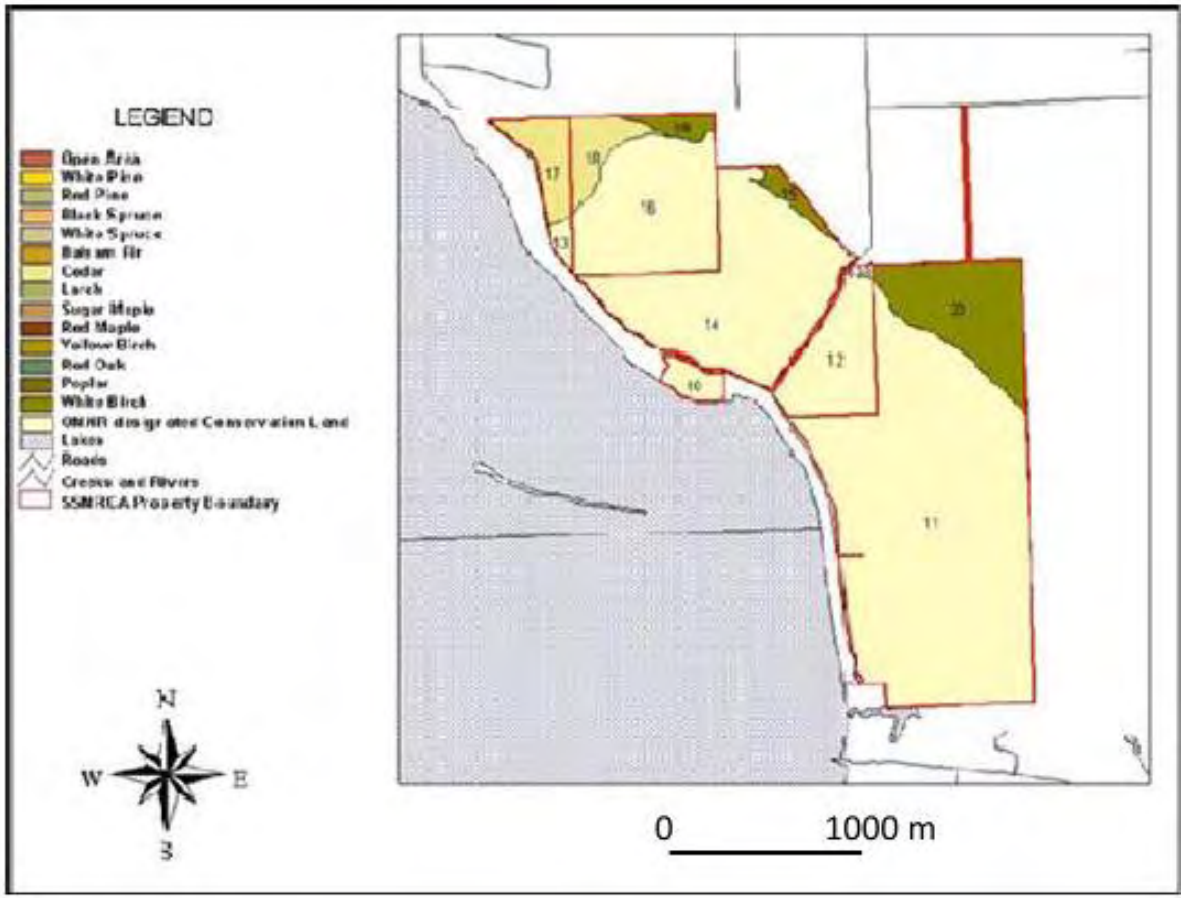

Figure 10: Managed Forest Compartments Map - Shore Ridges

SR 6.2 Summary of Managed Forest Compartments

Table 26: Eligible Managed Forest Compartments Areas Summary - Shore Ridges

Roll: 5 7 6 1 0 6 0 0 7 0 0 8 4 0 1 0 0 0 0

Compartment	Status	Area in Acres
13	cl	8.69
17	emf	30.15
Total		**38.84**

emf - Eligible Managed Forest
npeoa - Non-Productive Eligible Open Area
peoa - Productive Eligible Open Area
ia - Ineligible Area
cl - Conservation Land

5 7 6 1 0 6 0 0 7 0 0 0 6 0 0 0 0 0 0

Compartment	Status	Area in Acres
11	cl	470.56
20	emf	115.00
Total		**585.56**

non-forest outbuilding demolished 2017

5 7 6 1 0 6 0 0 7 0 0 6 9 0 0 0 0 0 0

Compartment	Status	Area in Acres
12	cl	73.01
14	cl	202.25
15	emf	18.65
18	ia	*1.95*
Total		**295.86**

5 7 6 1 0 6 0 0 7 0 0 7 0 1 0 0 0 0 0

Compartment	Status	Area in Acres
10	cl	13.51
Total		**13.51**

SR 7.0 Managed Forest Compartments Descriptions

SR 7.4 Forest Compartments Inventory

Table 27: Managed Forest Compartments Descriptions - Shore Ridges

Comp. Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
15	emf	36	1960	12.0	0.8	2	BW 4 B 2 SB 2 L 1 PO 1	ES17.2	na	1997
17	emf	17	1895	11.0	1.2	3	CE 6 B 2 SB 1 BW 1	ES33	na	1997
18	emf	17	1902	8.0	1.2	4	CE 9 SB 1	ES33	na	1997
19	emf	36	1930	17.0	0.9	2	BW 5 PO 3 B 1 MS 1	----	na	1997
20	emf	36	1927	20.0	1.1	1	OR 3 MS 3 BW 2 BF 1 PO1	ES17.1	25.5	2017

SR 7.7 Wildlife Species Noted

Table 28: Significant Wildlife Habitat Features - Shore Ridges

Property	General Location	Significant Wildlife Feature	Importance
Shore Ridges	SE Portion, Central and Western portion of the North block	Large forested wetland	This area is a major wintering area for a large deer population. Openings provide a ready food source while the cedar forest provides protection from snowfall.
	NE Portion of the North Block.	Mature oak and poplar forest bordering on the wetland	Part of the shoreline ridge landform with edge on wetland. Major wildlife travel corridor as well as providing excellent and varied avian habitat
	Southern Block	All aged oak, poplar, birch forest with balsam understory	Excellent avian habitat including open areas in the northwest section and the escarpment with its mature hemlock provides good cover. Also a transition to the adjacent wetland providing important ecosystem diversity.
Wildlife Species Noted	Beaver, skunk, porcupine, deer, other common small mammals and birds.		

SR 8.0 Forest Management Activities 2018-2027 (10 Yrs)

Table 29: Section 8 - Forest Management Activities 2018-2027 - Shore Ridges

Comp. Number	Objectives *(In no particular order)*	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, hectares thinned)		Year Scheduled	Comments
		Description of Activity	Quantifiable Measure		
20	Environment. Wildlife Financial Stability, Education Forest Health	Implement Group Selection System on approximately 10% of the stand to promote mid-tolerant species	115 acres	2019	Work with Staff and students at Sault College (could be demonstration forest area). See Appendix B for regulations
All	Environment, Watershed Protection, Forest Health	Using high visibility, durable, product mark or remark property boundary on North, East and Western perimeters	4 kms.	2018, 2023	Use UV stable pink or red flagging tape and paint. Maintenance required every 5 yrs
All	Recreation, Community	Maintain and enhance the present trail system	4+- km	Annual	Work with volunteers to monitor trails.
20	Education, Forest Health Environment, Watershed Protection, Wildlife	Mechanical vegetation management of unwanted species in the understory of group selection gaps	15 acres	3 acres per year from cut	Sault College 2nd year forestry students
20	Education, Forest Health	Maintain records on the PSP's located in this stand	9 plots	Ongoing	Sault College students are measuring these and college staff have records

Notes: Many activities for this property are common to ALL SSMRCA properties and can be found in Table 4 in Section 8.1

SR 9.0 Forest Management Activities 2008-2017 (10 Yrs)

Table 30: Section 9a - Report of Past Forest Management Area Activities 2008-2016 (2017 pending) - Shore Ridges

Comp. Number	Objectives	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, trees planted, hectares thinned)		Year Accomplished
		Description of Activity	Quantifiable Measure	
20	Recreation	• Fix or remove viewing platform	1 platform	---
20	Environment, Wildlife Self-Sustainable, Education Community	• Inventory, PHSP and recommend possible group selection and improvement cut to manage for mid-tolerant red oak	50 acres	---
20 entrance	Environment	• Gate and lock maintenance • Wetland designated Provincially Significant • Collect forest inventory data to verify MNR ortho photos	2x/yr 1 designation 3 plots	annual 2008-12 2014
20	Environment, Self-Sustainable	• Remove old building from site	1 building	---
All	Environment, Watershed Protection	• Re-mark property boundary on North, East and Western perimeters, 2 staff & **1 volunteer**	4 kms	2007
All	Recreation, Community	• Maintain and enhance the present trail system • Lay out & establish new trail through wetland • Lay out & establish new trail to connect Sunnyside 2 development	4+- km 1 trail 1 trail	ongoing 2009 2010
20	Community, Environment, Watershed Protection, Wildlife	• Tree planting with a variety of species suitable to the site.	1,600 trees	---

Table 31: Section 9b - Report of Past Forest Management Area User Activities 2008-2016 (2017 pending) - Shore Ridges

Objectives	Activity	
	User Group	**# of Events/Attendees**
Enhance Community Involvement and Communications **Environment** **Financial Stability** **Recreation** **Social, Cultural, Educational (Research)**	**Educational Institutes** • Sault College: - work with professor & students to identify sites for student based activities / studies / experiments - chainsaw training course – removed hazardous trees - wildlife, habitat, ecosystem, environmental protection educational exercises - since 1990's - forest growth & yield plots data collection - plot data entered into for 'itree Eco model' ecosystem services • Algoma University student establish 6-10 forest data plots for thesis **General Public** • Frequent recreational use of trails by general public year round • Participated in the Marsh Monitoring Program as lending library • Shore Ridges brochure **Government** • MNR staff training Forest Ecology & Soils Analysis sessions **Recreational Groups** • Voyageur Trail Association (VTA) basic trail maintenance • Staff guided hike for Sault Naturalist Club identified 4 bird species & owl birdhouse	 1 professor, 2 students 12 participants annual annual ~4-20 students 1 student ongoing annual annual annual ~20 participants **4 volunteers** 10 participants

Subsection - Gros Cap (GC) Specifics

GC 3.0 General Property History

The Gros Cap property was purchased by the SSMRCA in 1973. Its primary interests focused on the rare plants in the area as well as the geology and potential archaeological significance. The area contains a range of forest types resulting from the diverse landscapes found in the block. The site conditions range from pockets of organic soils, containing cedar, to deep glacial tills supporting sugar maple, oak and birch in the eastern portion, moving to valleys and bedrock outcrops on the western portion, with scattered white and red pine, cedar, oak, poplar and serviceberry being the primary woody species. The Voyageur trail transects the block.

GC 3.1 Description of Management Property History

GC 3.1.1 Natural and Cultural History

As with much of the Algoma Region the area most likely was dominated by white and red pine stands, with early logging resulting in the succession to a mixed maple-oak hardwood forest. Where no logging occurred (mainly on the less productive bedrock outcrops to the west) periodic natural fire events have maintained some of the pine-oak forest type.

The Voyageur Trail passes through the western portion and across the NE corner of the block with a number of secondary trails offering access for hikers to the many rock outcrops, providing beautiful views of Whitefish Bay of Lake Superior. In the NW corner of the block a detailed sign introduces travelers to this section of the trail and provides excellent views.

GC 3.1.2 History of Forest Operations

Marking by a certified tree marker was performed on much of the productive forest in the block in the fall of 1998. Harvesting by CA staff commenced in the winter of 1998. 15,230 fbm of hardwood was removed. Marking continued in the spring of 1999 with the majority of the harvesting carried out in 1999 and 2001. As a result an additional total of 67,010 fbm of maple, oak, white and yellow birch and 239 cords of firewood were extracted. Approximately 30 ha in total were harvested at the Gros Cap property. In 2005 a review of forest management activities was carried out to assess progress and make recommendations for future improvements. The review document is available upon request. This review indicated that the harvest had been carried out successfully and recommends improvements to be included in the new MFP. In addition, harvesting of Canada Yew (Ground Hemlock), *Taxus canadensis*, has taken place recently.

GC 3.2 Importance of Property to the Surrounding Landscape

The Voyageur Trail passes through the block in a number of locations and it would appear that this is where it begins its northward journey along the shores of Lake Superior. A permanent display sign introduces hikers to the trail and location upon its first approach to the Lake Superior vista. The 1998 plan outlined the area contained a number of rare plant species including Lime Saxifrage, Tickseed, and small-flowered Collinsia. The area provides an excellent example of the surrounding landscape as it includes wetlands, hardwood forests and bedrock outcrops.

GC 3.2.1 General Block Conditions, Flora and Fauna

As noted earlier it also contains a broad cross section of varied landscapes and ecosystems typical of the Lake Superior shoreline. A variety of forest types can be found. The wetland on the eastern edge of the property and its surrounding lowland forest remains in relatively pristine state as well as the bedrock landscape to the west. In the recently harvested area regeneration is occurring.

GC 3.2.2 Wetlands

The northeast corner of the block contains a number of beaver ponds that are a result of damming of a small creek. Other than this, drainage mainly occurs as surface run-off and small springs exiting through the bedrock valleys to the west.

GC 3.2.3 Roads and Trails

The block is transected in a north-south direction, by an all-weather gravel road (Marshall Drive) that provides access to the cottage owners east of Jackson Island.

GC 4.0 Property Location Maps

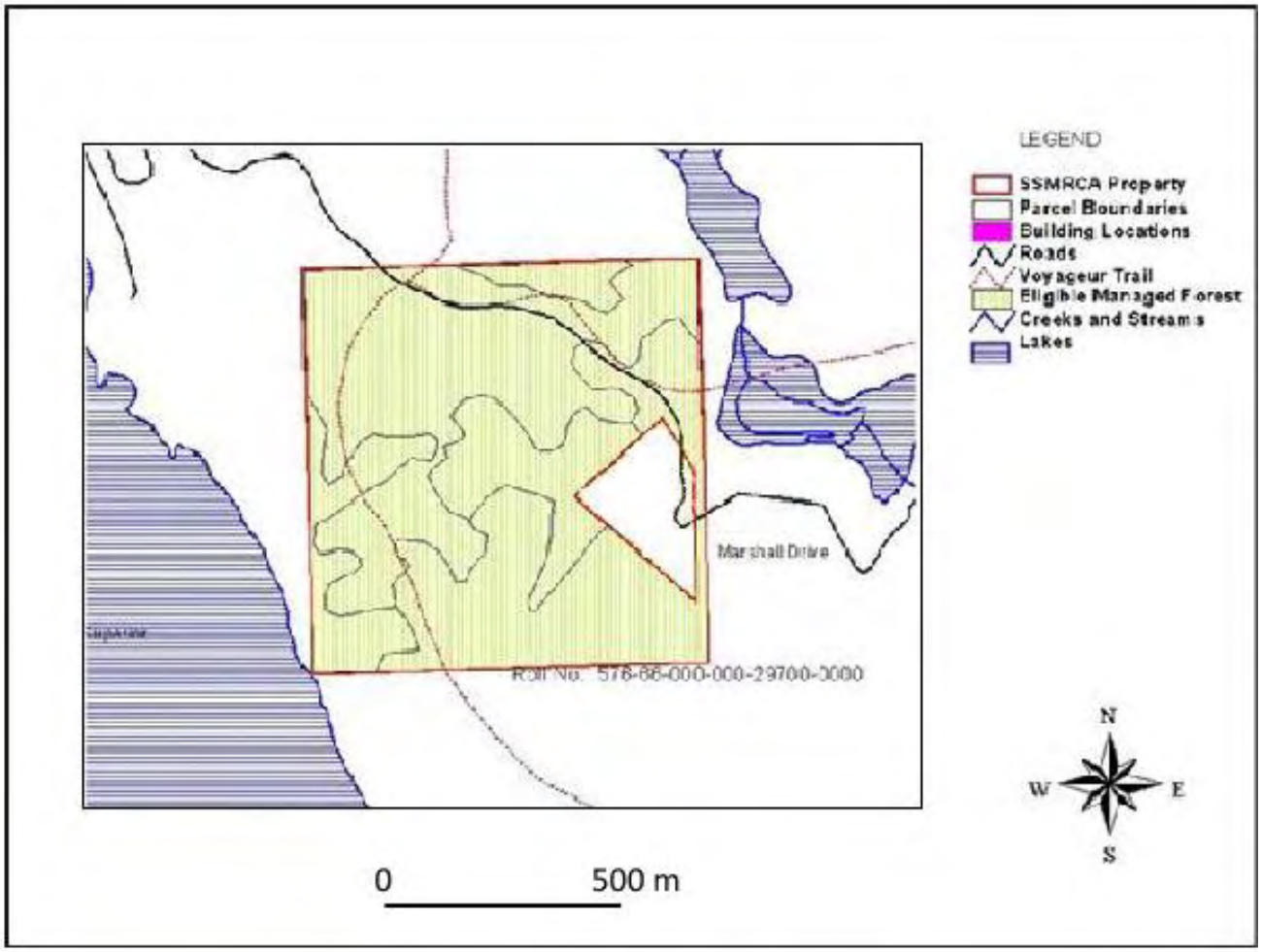

Figure 11: Property Location Map - Gros Cap

GC 6.0 Managed Forest Compartments

GC 6.1 Managed Forest Compartments Maps

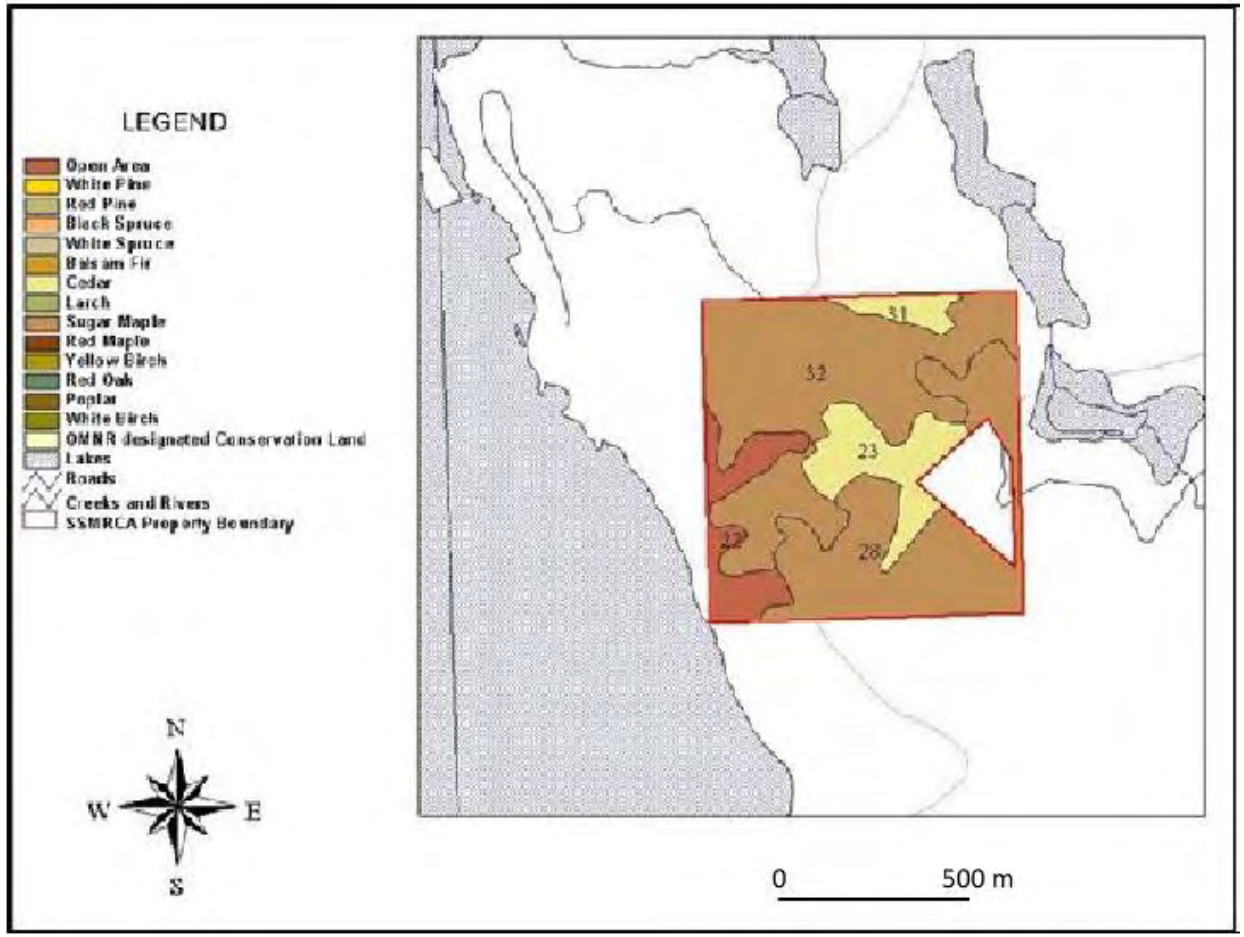

Figure 12: Managed Forest Compartments Map - Gros Cap

GC 6.2 Summary of Managed Forest Compartments

Table 32: Eligible Managed Forest Compartments Areas Summary - Gros Cap

Roll: 5 7 6 6 0 0 0 0 0 0 2 9 7 0 0 0 0 0 0

Compartment	Status	Area in Acres
23	emf	16.84
28	emf	46.35
31	emf	4.65
32	emf	64.95
22	npeoa	13.26
Total		**146.05**

emf - Eligible Managed Forest
npeoa - Non-Productive Eligible Open Area
peoa - Productive Eligible Open Area
ia - Ineligible Area
cl - Conservation Land
No buildings

GC 7.0 Managed Forest Compartments Descriptions

GC 7.4 Forest Compartments Inventory

Table 33: Managed Forest Compartments Descriptions - Gros Cap

Comp. #	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	Last Inventory Year	Last Silv. Tending Year	Basal Area (m2)
31	emf	17	0	0.0	0.0	3	na	na	na	None	Na
22	npeoa	0	0	0.0	0.0	B&S	Bedrock	ES8	2007	None	Na
23	emf	17	1892	11.0	1.0	3	CE 5 BY 1 MH 1 B 1 MS 1 BW 1	ES29.1	1997	None	Na
28	emf	22	1900	20.0	1.2	2	MH 5MS 2BW 1BY 1OR 1	ES29.1	2005	2001	14.3
32	emf	22	1892	11.0	1.0	3	MH 6OR 2MR 2	ES29.1	2005	2001	16.1

GC 7.7 Wildlife Species Noted

Table 34: Significant Wildlife Habitat Features - Gros Cap

Property	General Location	Significant Wildlife Feature	Importance
Gros Cap	NE Edge	Riparian Area	These areas offer water, increased productivity, vegetative diversity, edges and openings essential to some species.
	Central Zone	Cedar wetland	Potential deer yard area affording shelter and edge which provides excellent habitat for both mammals and avian populations
	North and South Tolerant Hardwood Forests	Recent selective harvesting has provided new growth and a range of age classes	With natural springs and a range of habitat conditions the area will have both food and shelter suitable for a variety of mammals and bird species.
	West Bedrock Zone	Snags and viewing platforms	Raptors may occupy mature trees both for viewing potential food sources on land and in the adjacent Lake Superior Shoreline
Wildlife Species Noted	Beaver, porcupine, moose, deer, other common small mammals and birds.		

GC 8.0 Forest Management Activities 2018-2017 (10 Yrs)

Table 35: Section 8 - Forest Management Activities 2018-2027 - Gros Cap

Comp. Number	Objectives *(In no particular order)*	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, hectares thinned)		Year Scheduled	Comments
		Description of Activity	Quantifiable Measure		
28	Environment, Watershed Protection, Wildlife	Monitor oak decline – set up plots with live healthy oak and areas showing decline.	2 – 20m radius plots – 2x per yr	2018	Develop recording method and partnership with local volunteers or naturalists
All	Environment, Watershed Protection	Using high visibility & durable product, re-mark property boundary on North, East and Southern perimeters	2.4 kms.	2018, 2023	Use UV stable pink or red flagging tape and paint. Maintenance required every 5 yrs.
All	Education-Research, Environment, Community	Identify and confirm areas of rare plants (GPS areas)	1 page report	2019-2022	Work with Sault Naturalists and others to inventory and report on rare plant species
All	Recreation	GPS Voyageur trail	2+- kms.	2018	Provide tracks to GIS at SSMRCA- Values protection and public safety

Notes: Many activities for this property are common to ALL SSMRCA properties and can be found in Table 4 in Section 8.1

GC 9.0 Forest Management Activities 2008-2017 (10 Yrs)

Table 36: Section 9a - Report of Past Forest Management Area Activities 2008-2016 (2017 pending) - Gros Cap

Comp. Number	Objectives	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, trees planted, hectares thinned)		Year Accomplished
		Description of Activity	Quantifiable Measure	
28	Environment, Watershed Protection, Wildlife	• Monitor oak decline – set up plots with live healthy oak and decline.	2 - 20m radius plots checked 2x/yr	---
All	Environment, Watershed Protection	• Re-mark property boundary on North, East and Southern perimeters • Collect forest inventory data to verify MNR ortho photos	2.4 kms 4 plots	2007 2014
All	Recreation, Community	• Maintenance of the Voyageur Trail	2+-kms	annual
All	Education-Research, Environment, Community	• Identify and confirm areas of rare plants (GPS areas)	1 page report	---
All	Recreation	• GPS Voyageur Trail	2+- kms	---

Table 37: Section 9b - Report of Past Forest Management Area User Activities 2008-2016 (2017 pending) - Gros Cap

Objectives	Activity	
	User Group	# of Events/Attendees
Enhance Community Involvement and Communications **Environment** **Financial Stability** **Recreation** **Social, Cultural, Educational (Research)**	**Educational Institutes** • Sault College: - Location selected & installation of Environment Canada's Integrated Deposition Network **General Public** • Frequent recreational use of trails year round • Geocaches located throughout, increasing continuously • Volunteer spread sawdust/wood shavings to wet/muddy sections of Voyageur Trail	2013 install; annual 2-3x/yr sample collection 1 scientist & 2 students ongoing ongoing annual / *1 volunteer*

Subsection - Walls Lake (WL) Specifics

WL 3.0 General Property History

WL 3.1 General Description

Registry records indicate the property, Section 29 of Prince Township, was originally purchased for mining rights in 1952. The township acquired the surface rights in 1957, and the SSMRCA purchased it from Prince Township in 1989. The 1998 MFP recommended a stand improvement cut for most of the area, which was carried out during the management period.

WL 3.1.1 Natural and Cultural History

The area was most likely dominated by pine forests and with harvesting around the turn of the century, succeeded to the primarily tolerant hardwood forest found today.

The Voyageur trail passes through the south end of the block, on its journey to Lake Superior. A trapper's cabin can be found on the site. A potential burial site was located during the 2005 audit with old building remnants from early settlement in the area.

WL 3.1.2 History of Forest Operations

A certified tree marker marked much of the area in the summer of 1999 and again in 2002. Harvesting by CA staff began in the fall of 1999. CA staff removed a total of 59,229 fbm of oak, maple and birch. In additional, 42 cords of firewood were also removed.

In 1999 a significant trespass was discovered in the south-eastern portion of the Walls Lake property. A subsequent investigation by CA staff working with a consultant resulted in the recovery of $10,090 based on an estimate of 156 trees removed with an estimated volume of 19,578 fbm hardwoods and 3,655 fbm softwood. In addition the logger was required to carry out remedial action on the area to correct and repair poor logging practices and environmental damage caused by the trespass.

Tree marking continued on the block in 2002 and resulted in a harvest of 58,768 fbm and 225 cords of firewood. An additional harvest in 2003 removed 32,990 fbm of poplar, maple, oak and birch plus 130 cords of firewood. The CA staff conducted harvest activities as time and conditions allowed. At the time

operations were halted for the 2005 review of forest management activities, the CA cut approximately 83 ha. of the Walls Lake property. This review stressed the need to remove marked trees remaining on site and cited concerns about the number of skid trails and landings. The review document, which is available upon request, also noted good incorporation of the recreational hiking trail and remnants of two old cabins into the harvesting operations.

WL 3.2 Importance of Property to the Surrounding Landscape

The Voyageur trail passes through the south-central portion of the block in an east-west direction. The block has been identified as an important waterfowl staging area, as Walls Lake is relatively large water body on a known flyway, and two smaller ponds are located on the eastern side of the property.

WL 3.2.1 General Conditions, Flora and Fauna

The mainly tolerant hardwood forests on relatively deep sandy loam soils with bedrock outcrops in rolling terrain provides a typical “north shore” forest type.

WL 3.2.2 Wetlands

The area is characterized by two sizable wetlands, one, the south end of Walls Lake and with an associated wetland to the east and the headwaters of the Carp River to the south-east, and two, another drainage area in the North-east side, with ponds and headwaters, again, of the Carp River.

WL 3.3.3 Roads and Trails

A well-traveled road/trail transects the southern half of the block in an east-west-east direction providing access linking Marshall Drive to Prince Lake Road. A north-south trail is also evident.

WL 4.0 Property Location Maps

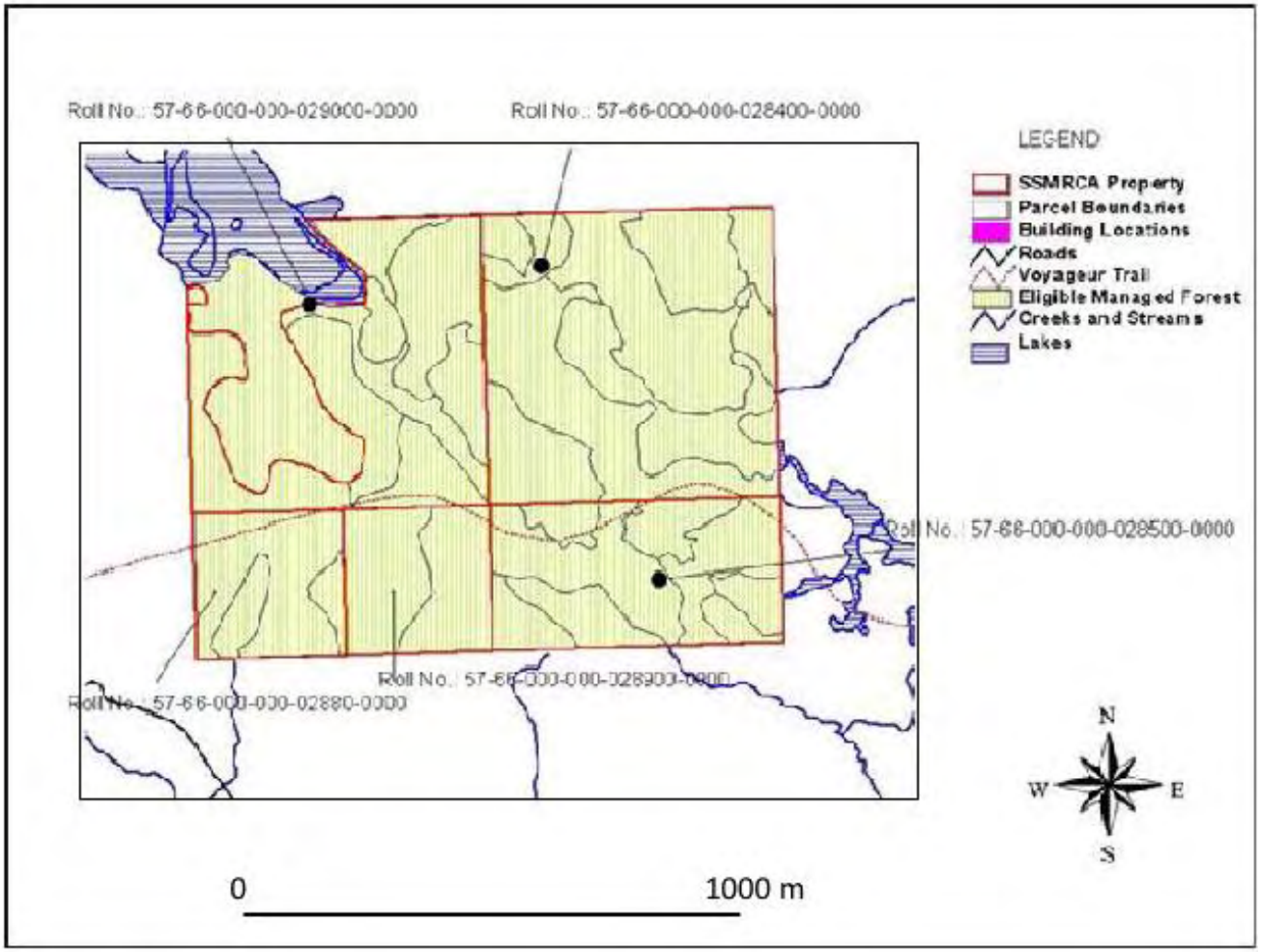

Figure 13: Property Location Map - Walls Lake

WL 6.0 Managed Forest Compartments

WL 6.1 Managed Forest Compartments Maps

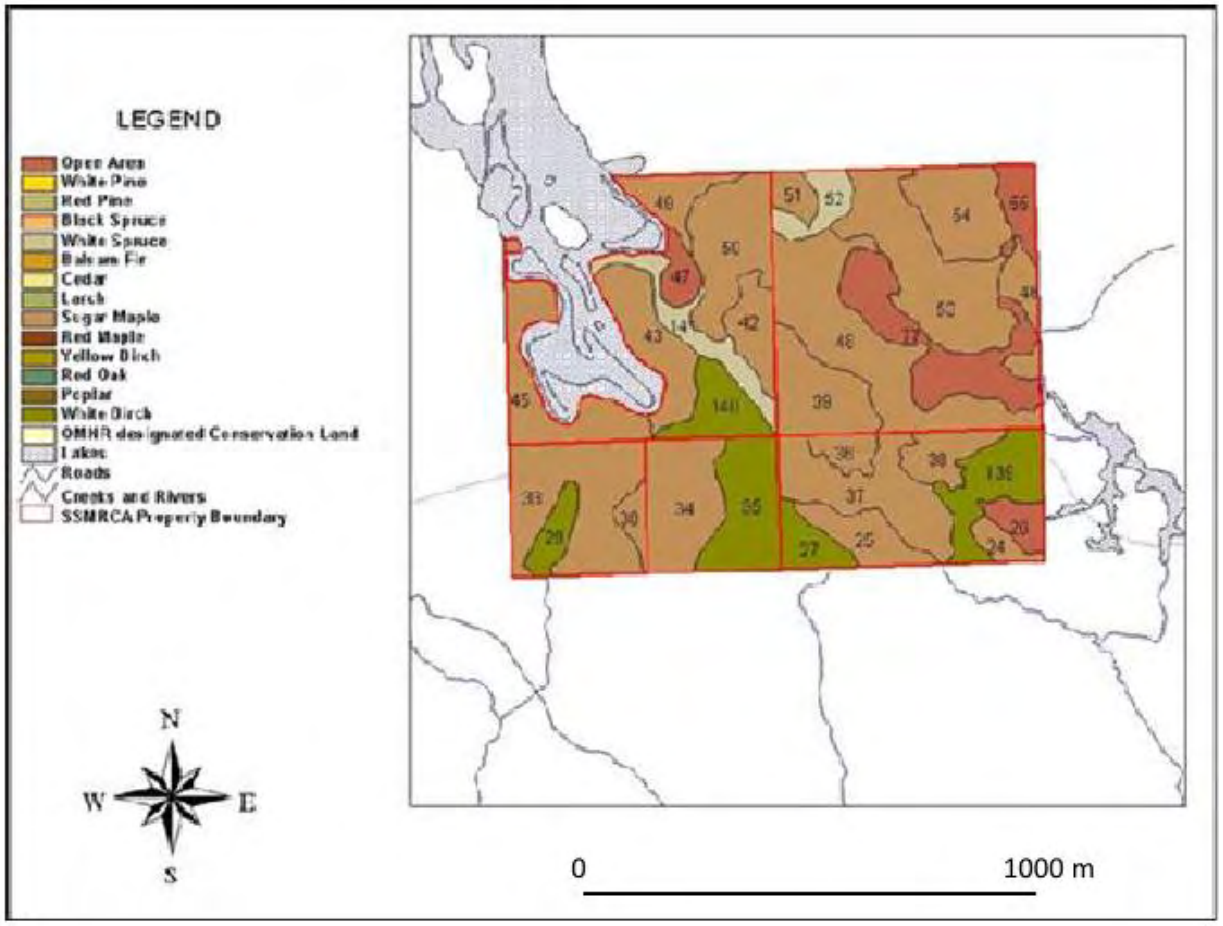

Figure 14: Managed Forest Compartments Map - Walls Lake

WL 6.2 Summary of Managed Forest Compartments

Table 38: Eligible Managed Forest Compartments Areas Summary - Walls Lake

Roll: 5 7 6 6 0 0 0 0 0 0 2 8 4 0 0 0 0 0 0

Compartment	Status	Area in Acres
39	emf	17.42
46	emf	6.80
48	emf	39.93
51	emf	4.19
52	emf	6.72
53	emf	36.50
54	emf	17.52
55	npeoa	6.73
77	npeoa	24.19
Total		**160.00**

emf - Eligible Managed Forest
npeoa - Non-Productive Eligible Open Area
peoa - Productive Eligible Open Area
ia - Ineligible Area
cl - Conservation Land

No buildings on all roll numbers

Roll: 5 7 6 6 0 0 0 0 0 0 2 8 5 0 0 0 0 0 0

Compartment	Status	Area in Acres
24	emf	3.64
25	emf	10.02
26	npeoa	5.24
27	emf	7.16
36	emf	4.86
37	emf	24.24
38	emf	8.44
39	emf	16.40
Total		**80.00**

Roll: 5 7 6 6 0 0 0 0 0 0 2 8 8 0 0 0 0 0 0

Compartment	Status	Area in Acres
34	emf	21.03
35	emf	18.97
Total		**40.00**

Roll: 5 7 6 6 0 0 0 0 0 0 2 8 9 0 0 0 0 0 0

Compartment	Status	Area in Acres
29	emf	5.62
30	emf	3.47
33	emf	30.91
Total		**40.00**

Table 27: Eligible Managed Forest Compartments Areas Summary - Walls Lake (Cont'd)

Roll: ***5 7 6 6 0 0 0 0 0 0 2 9 0 0 0 0 0 0 0***

Compartment	Status	Area in Acres
42	emf	9.00
43	emf	16.66
45	emf	20.63
47	npeoa	4.84
49	emf	8.18
50	emf	22.09
140	emf	10.82
141	emf	10.87
142	ia	*26.19*
143	npeoa	19.72
Total		**149.00**

WL 7.0 Managed Forest Compartments Descriptions

WL 7.4 Forest Compartments Inventory

Table 39: Managed Forest Compartments Descriptions - Walls Lake

Comp. Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
52	emf	12	0	0.0	0.0	----	Sw / Bf		na	1997
141	emf	12	0	0.0	0.0	----	Sw / Bf		na	1997
24	emf	22	1920	18.0	0.7	2	MH 4 BY 2 B 1 BW 1 MS 1 OR 1	ES29.1	na	1997
25	emf	22	1920	18.0	0.7	2	MH 4 BY 2 B 1 BW 1 MS 1 OR 1	ES29.1	na	1997
26	npeoa	0	0	0.0	0.0	na	bedrock	ES8	na	2007
27	emf	36	1913	18.0	1.1	2	BW 5 PO 1 B 1 MS 1 MH 1 OR 1	ES17.2	na	1997
29	emf	36	1913	18.0	1.1	2	BW 5 PO 1 B 1 MS 1 MH 1 OR 1	ES17.2	na	1997
30	emf	22	1920	18.0	0.7	2	MH 4 BY 2 B 1 BW 1 MS 1 OR 1	ES29.1	15.6	2005
33	emf	22	1925	19.0	1.1	1	MH 5 OR 3 MS 2	ES24.1	na	1997
34	emf	22	1920	18.0	0.7	2	MH 4 BY 2 B 1 BW 1 MS 1 OR 1	ES29.1	15.6	2005
35	emf	36	1913	18.0	1.1	2	BW 5 PO 1 B 1 MS 1 MH 1 OR 1	ES17.2	13.8	2005
36	emf	22	1920	18.0	0.7	2	MH 4 BY 2 B 1 BW 1 MS 1 OR 1	ES29.1	na	1997
37	emf	22	1920	18.0	0.7	2	MH 4 BY 2 B 1 BW 1 MS 1 OR 1	ES29.1	na	1997
38	emf	22	1950	15.0	1.0	1	MH 6 B 1 BY 1 MS 1 PO 1	ES29.1	na	1997
39	emf	22	1920	18.0	0.7	2	MH 4 BY 2 B 1 BW 1 MS 1 OR 1	ES29.1	17.2	2005
42	emf	22	1920	18.0	0.7	2	MH 4 BY 2B 1 BW 1 MS 1 OR 1	ES29.1	na	1997
43	emf	22	1921	19.0	1.0	1	MH 8 OR 1 MS 1	ES24.1	na	1997
45	emf	22	1925	19.0	1.1	1	MH 5 OR 3 MS 2	ES24.1	na	1997
46	emf	22	1930	18.0	1.0	1	MH 5 OR 3 BY 1 MS 1	----	26.8	2005
47	npeoa	0	0	0.0	0.0	na	fen	na	na	2007
48	emf	22	1950	15.0	1.0	1	MH 6 B 1 BY 1 MS 1 PO 1	ES29.1	17.2	2005
49	emf	22	1920	18.0	0.8	2	MH 4 BY 3 B 1 CE 1 PW 1	ES29.1	na	1997
50	emf	22	1921	19.0	1.0	1	MH 8 OR 1 MS 1	ES24.1	17.2	2005
51	emf	22	1920	18.0	0.8	2	MH 4 BY 3 B 1 CE 1 PW 1	ES29.1	na	1997

Table 28: Managed forest Compartments Descriptions - Walls Lake (Continued from previous page)

Comp. Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
53	emf	22	1950	15.0	1.0	1	MH 6 B 1 BY 1 MS 1 PO 1	ES29.1	26.8	2005
54	emf	22	1935	17.0	0.9	1	MH 7 BY 1 B1 MS 1	ES29.1	26.8	2005
55	npeoa	0	0	0.0	0.0	na	fen	na	na	2007
77	npeoa	0	0	0.0	0.0	na	lake	na	na	2007
139	emf	36	950	15.0	1.0	2	BW 5 BY 3 MH 1 MS 1	ES17.2	na	1997
140	emf	36	913	18.0	1.1	2	BW 5 PO 1 B 1 MS 1 MH 1 OR 1	ES17.2	na	1997

WL 7.7 Wildlife Species Noted

Table 40: Significant Wildlife Habitat Features - Walls Lake

Property	General Location	Significant Wildlife Feature	Importance
Walls Lake	NW Section	Walls Lake and surrounding wetland	Noted as a significant waterfowl staging area, as the Lake is large and shallow and on the central flyway. Possible moose aquatic feeding area.
	Central East	Beaver Ponds	These areas offer water, marshland and increased production, vegetative diversity, edges and openings essential to some species. The surrounding forest also helps maintain and preserve water quality.
	SW Central and SE Sections	None – mainly rolling topography and tolerant hardwoods stands with two areas Bw	In the areas of recent selective harvest a new source of browse for ungulates known to be present in the area will be available.
Wildlife Species Noted	Waterfowl, moose, deer, beaver, skunks, hares and rodents		

WL 8.0 Forest Management Activities 2018-2027 (10 Yrs)

Table 41: Section 8 - Forest Management Activities 2018-2027 - Walls Lake

Comp. Number	Objectives *(In no particular order)*	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, hectares thinned)		Year Scheduled	Comments
		Description of Activity	Quantifiable Measure		
All	Environment, Financial Stability, Forest Health	Investigate long-term access agreement from western limits. Install gate and upgrade road as part of a forest health improvement contract.	1 agreement for liability 800 m	2018 During harvest	400m across private and 400m across CA property
30, 33, 34	Environment, Watershed Protection, Wildlife, Forest Health	Monitor oak decline – set up plots with live healthy oak and areas showing decline.	2 – 20m radius plots checked twice per year	Annual	Develop recording method and partnership with local volunteers or naturalists
45, 46, 48, 53, 54	Education, Financial Stability, Environment, Forest Health, Wildlife	Develop and implement silvicultural prescriptions for selection, uniform shelterwood harvesting on stands to improve forest health	approx..40 ha (100 acres)	2018-2023	Use certified tree markers and R.P.F with appropriate qualifications to implement contractors. See Appendix B for Guidelines
34	Research-Education	Investigate cultural heritage value of rock cairns- gps and map as Forest Value-protection	1 page report	2020	Contact cultural heritage organization in City of SSM
140	Environment, Watershed Protection, Recreation	Install a beaver baffler on main access trail to prevent flooding	1 installation	2018 or harvest year	
All	Environment, Watershed Protection	Using high visibility & durable product, mark or re-mark the property boundary on North, East and Southern perimeters	5 kms.	2018, 2023	Use UV stable pink or red flagging tape and paint. Maintenance required every 5 yrs

Notes: Many activities for this property are common to ALL SSMRCA properties and can be found in Table 4 in Section 8.1

WL 9.0 Forest Management Activities 2008-2017 (10 Yrs)

Table 42: Section 9a - Report of Past Forest Management Area Activities 2008-2016 (2017 pending) - Walls Lake

Comp. Number	Objectives	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, trees planted, hectares thinned)		Year Accomplished
		Description of Activity	Quantifiable Measure	
NW Section	Research-Education Environment, Wildlife Watershed Protection	• Undertake study to determine importance of this wetland	3 page report	---
30, 34	Environment, Watershed Protection, Wildlife	• Monitor oak decline – set up plots with live healthy oak and decline.	2 - 20m radius plots checked 2x/yr	---
46, 53, 54	Environment, Wildlife, Self Sustainable	• Inventory area and develop PHSP as to whether the area harvested should be completed	~ 50 acres	---
34	Research-Education	• Investigate cultural heritage value of rock cairns - GPS & map under protection forest	1 page report	---
140	Environment, Watershed Protection, Recreation	• Install a beaver baffler on main access trail to prevent flooding • Collect forest inventory data to verify MNR ortho photos	1 installation 5 plots	--- 2014
All	Environment	• Gate and lock maintenance	2x/yr	---
South portion	Recreation	• Trail maintenance • Plan & layout connecting trails with adjoining Superior Watershed Van Nuy Conservancy Area property with **4 volunteers**	2 km 1 trail	ongoing 2013, 2016
All	Environment Watershed Protection	• Re-mark property boundary on North, East and Southern perimeters. 2 staff & 1 volunteer	5 kms	2007

Table 43: Section 9b - Report of Past Forest Management Area User Activities 2008-2016 (2017 pending) - Walls Lake

Objectives	Activity	
	User Group	# of Events/Attendees
Recreation **Social, Cultural, Educational (Research)**	**General Public** • limited recreational use of trails year round	ongoing

Subsection - Headwater & Burke (H&B) Specifics

H&B 3.0 General Property History

H&B 3.1 General Description

In 1975, the owner of the Headwater property donated the Conservation Authority's share of the cost through the Conservation Fund. Final acquisition did not take place until 1983. The Burke property contains a parcel of land donated to the CA by the Burke family, with adjacent properties purchased by the Authority between 1975 and 1987.

H&B 3.1.1 Natural and Cultural History

As with much of the Algoma Region, both of these properties were more than likely dominated by white and red pine stands, with early logging resulting in the succession to a mixed maple-oak hardwood forest. Where no logging occurred (on steep sloped bedrock outcrops to the north) some residual white pine still remains.

H&B 3.1.2 History of Forest Operations

Looking at the present forest type and condition, the Headwaters property was most likely logged in the late 19th and early 20th century, but no records are available to confirm this. An improvement cut on approximately 100 acres was carried out in 1983 with the Authority receiving 13,410 board feet of spruce in exchange for the stumpage rights to the private logger.

As a result of recommendations in the 1998 MFP 20+ ha was marked by a certified tree marker in the winter of 2000, followed shortly after by a harvest on just over one half of the marked area. The resulting harvest by CA staff produced 44,828 fbm of spruce, maple and yellow birch. As well, poorer quality material and tops resulted in the production of 260 cords of firewood. The CA staff undertook harvesting activities as time and conditions allowed and in 2005 operations were halted to facilitate a review of the forest management activities, approximately 11 ha were harvested at the Headwaters block. The review indicated that the harvesting operations are incomplete and stressed the importance of removing the remaining marked trees. However it was noted that some trees marked for removal were situated on very steep slopes. It was also reported that the harvesting activities that were carried out by the CA resulted in minimal residual and site damage.

No recent logging has occurred at the Burke site due to its relative inaccessibility.

H&B 3.2 Importance of Property to the Surrounding Landscape

The forest at Headwaters is representative forest types and conditions on public land, in the Algoma Highlands. This area is the “height of land” for the City of Sault Ste. Marie as one can see clearly in all directions from the centre of the property and it is truly a headwater, being a substantial contributor to the Davignon Creek.

There are many wetlands areas traversing the Burke property in a NW to SE direction including the headwaters of Canon and Davignon Creeks. The largest wetland contains open water approx.100 metres wide by nearly 2 kms. in length.

H&B 3.2.1 General Conditions, Flora and Fauna

Typical of the Great Lakes St. Lawrence Forest Region, both of these properties exhibit a majority of tolerant hardwood forest containing sugar maple, yellow birch and red oak, with spruce, balsam fir and cedar pockets scattered throughout.

H&B 3.2.2 Wetlands

The Headwaters block has three major wetland areas transecting its boundaries in a mainly northwest to southeast direction. With the steep topography of the surrounding forested areas, they provide a natural break in the landscape.

The Burke block has two major wetlands, one across the northeast side and one in the southwest corner, both of which could be considered headwaters for the Canon and Davignon creeks. They contain open water, marsh and a range of alder and cedar thickets.

H&B 3.2.3 Roads and Trails

While no vehicular access is presently available at either property, old logging roads and skid trails are scattered across both properties.

H&B 4.0 Property Location Maps

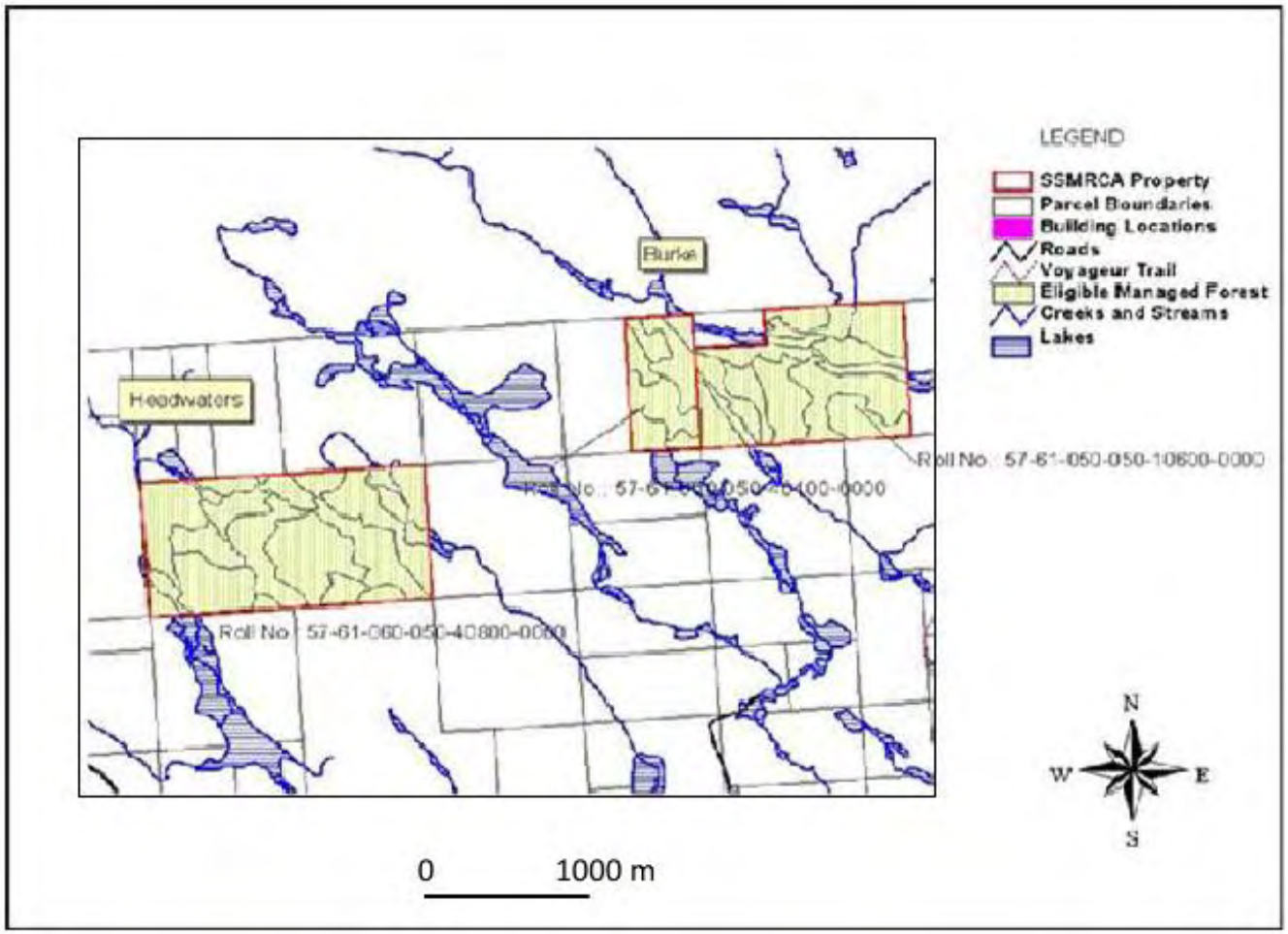

Figure 15: Property Location Map - Headwaters & Burke

H&B 6.0 Managed Forest Compartments

H&B 6.1 Managed Forest Compartments Maps

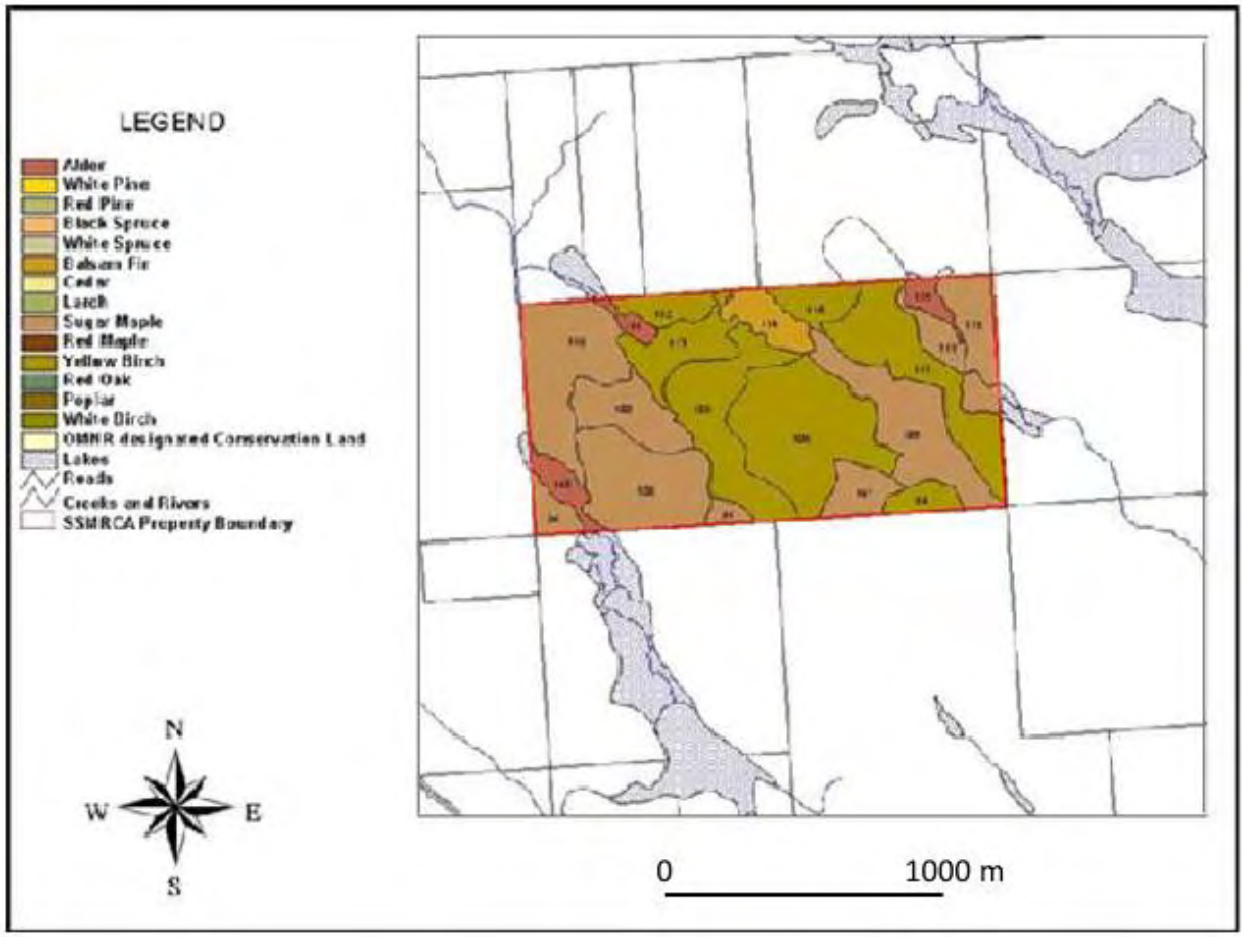

Figure 16: Managed Forest Compartments Map - <u>Headwaters</u>

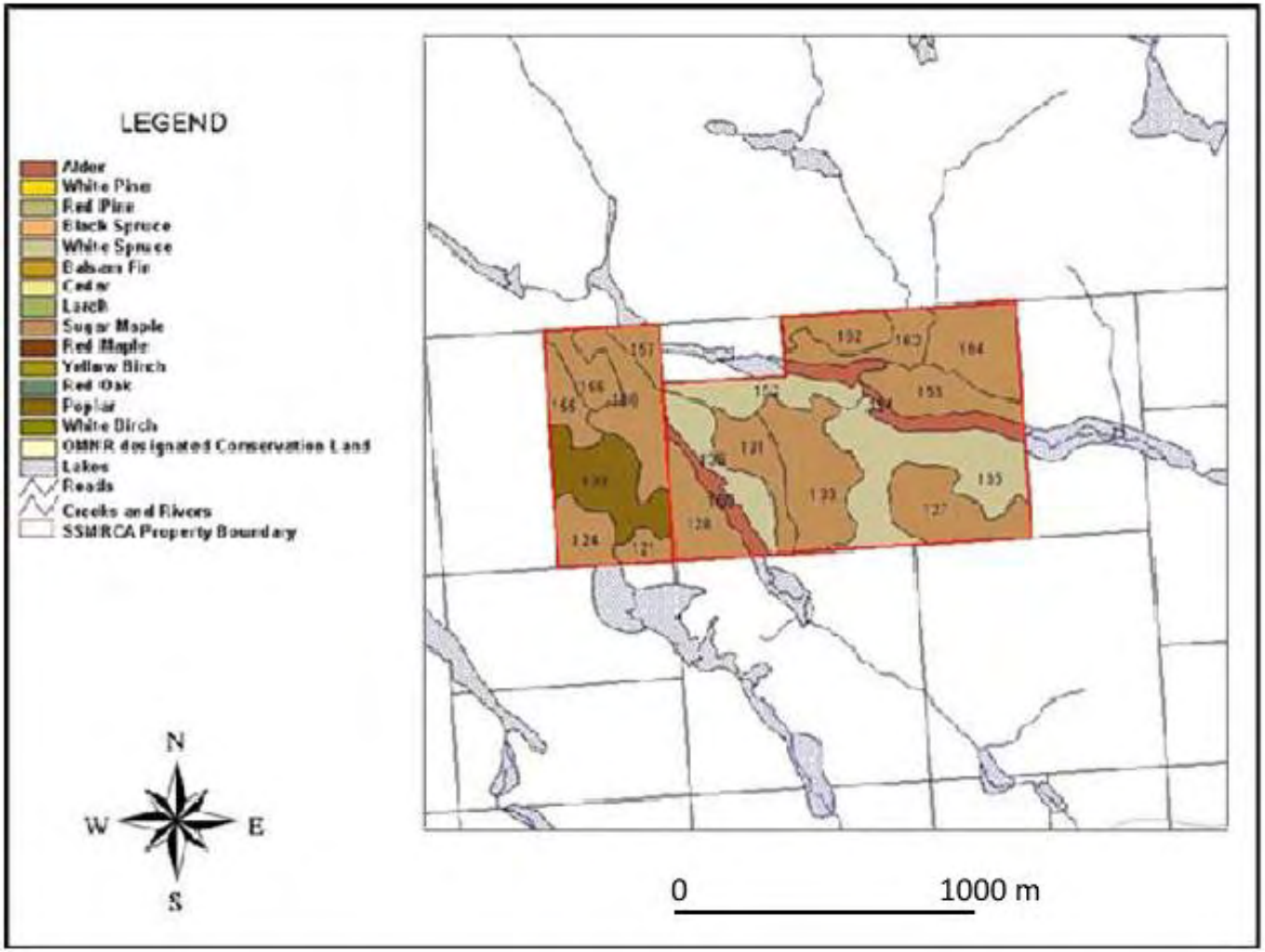

Figure 17: Managed Forest Compartments Map - <u>Burke</u>

H&B 6.2 Summary of Managed Forest Compartments

Table 44: Eligible Forest Compartments Areas Summary - Headwaters

Roll: | 5 | 7 | 6 | 1 | 0 | 6 | 0 | 0 | 5 | 0 | 4 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |

Compartment	Status	Area in Acres
91	emf	2.74
94	emf	5.45
96	emf	5.58
100	emf	32.40
102	emf	16.81
106	emf	47.32
108	emf	31.74
109	emf	32.23
110	emf	34.40
111	npeoa	2.89
112	emf	7.22
113	emf	15.19
114	emf	9.67
115	emf	10.06
116	emf	8.12
117	emf	31.51
118	npeoa	4.02
119	emf	12.37
147	emf	9.00
148	emf	6.28
Total		**325.00**

emf - Eligible Managed Forest
npeoa - Non-Productive Eligible Open Area
peoa - Productive Eligible Open Area
ia - Ineligible Area
cl - Conservation Land

No buildings

Table 45: Eligible Forest Compartments Areas Summary - Burke

Roll: 5 7 6 1 0 5 0 0 5 0 1 0 6 0 0 0 0 0 0

Compartment	Status	Area in Acres
127	emf	21.76
128	emf	15.26
131	emf	14.01
133	emf	28.73
135	emf	41.93
136	emf	14.51
150	npeoa	6.24
152	emf	7.15
153	emf	16.12
154	npeoa	12.60
162	emf	10.61
163	emf	11.36
164	emf	21.62
Total		**221.90**

emf - Eligible Managed Forest
npeoa - Non-Productive Eligible Open Area
peoa - Productive Eligible Open Area
ia - Ineligible Area
cl - Conservation Land

No buildings on all roll numbers

Roll: 5 7 6 1 0 6 0 0 5 0 4 0 4 0 0 0 0 0 0

Compartment	Status	Area in Acres
121	emf	4.50
124	emf	10.55
130	emf	22.68
155	emf	8.37
156	emf	8.58
157	emf	5.48
180	emf	20.34
Total		**80.50**

H&B 7.0 Managed Forest Compartments Descriptions

H&B 7.4 Forest Compartments Inventory

Table 46: Managed Forest Compartments Descriptions - Headwaters

Comp. Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
91	emf	22	1928	17.0	1.0	3	MH 7 BY 2 MS 1	ES29.2	na	1999
94	emf	26	1865	21.0	0.7	2	BY 4 MH 2 B 1 MS 1 PW 1 SW 1	ES29.2	na	1999
96	emf	22	1915	22.0	0.8	1	MH 9 MS 1	ES29.2	na	1999
100	emf	22	1932	17.0	1.1	2	MH 9 BY 1	ES29.2	17.8	2005
102	emf	22	1932	17.0	1.1	2	MH 9 BY 1	ES29.2	17.8	2005
106	emf	26	1865	21.0	0.7	2	BY 4 MH 2 B 1 MS 1 PW 1 SW 1	ES29.2	15.1	2005
108	emf	22	1905	19.0	0.7	2	MH 4 B 1 BW 1 BY 1 MS 1 SB 1 SW 1	ES29.2	na	1999
109	emf	26	1865	21.0	0.7	2	BY 4 MH 2B 1 MS 1 PW 1 SW 1	ES29.2	15.1	2005
110	emf	22	1932	17.0	1.1	2	MH 9 BY 1	ES29.2	na	1999
111	npeoa	0	0	0.0	0.0	---	Pond		Na	2007
112	emf	26	1865	21.0	0.7	2	BY 4 MH 2 B 1 MS 1 PW 1 SW 1	ES29.2	na	1999
113	emf	26	1865	21.0	0.7	2	BY 4 MH 2 B 1 MS 1 PW 1 SW 1	ES29.2	na	1999
114	emf	13	1945	10.0	0.4	1	B 5 BW 2 L 2 CE 1	ES32	na	1999
115	emf	22	1905	19.0	0.7	2	MH 4 B 1 BW 1 BY 1 MS 1 SB 1 SW 1	ES29.2	na	1999
116	emf	26	1865	21.0	0.7	2	BY 4 MH 2 B 1 MS 1 PW 1 SW 1	ES29.2	na	1999
117	emf	26	1865	21.0	0.7	2	BY 4 MH 2 B 1 MS 1 PW 1 SW 1	ES29.2	na	1999
118	npeoa	0	0	0.0	0.0	---	Fen		Na	2007
119	emf	22	1905	19.0	0.7	2	MH 4 B 1BW 1 BY 1 MS 1 SB 1 SW 1	ES29.2	na	1999
147	emf	22	1905	19.0	0.7	2	MH 4 B 1BW 1 BY 1 MS 1 SB 1 SW 1	ES29.2	na	1999
148	npeoa	0	0	0.0	0.0	---	Large beaver pond		Na	2007

Table 47: Managed Forest Compartments Descriptions - Burke

Comp. Number	Status	Working Group Species	Year of Origin	Height (m)	Stocking	Site Class	Species Composition	FEC	BA (m2/ha)	Last Inv. Date
121	emf	22	1925	17.0	1.0	2	MH 5 MS 2 BW 1 BY 1 PW 1	ES29.1	na	1997
124	emf	22	1920	20.0	0.9	1	MH 8 BY 1 SW 1	ES29.1	na	1997
127	emf	22	1935	16.0	1.2	2	MH 6 MS 1 BY 1 SW 1 BW 1	ES29.1	23.2	2007
128	emf	22	1925	17.0	1.0	2	MH 5 MS 2 BW 1 BY 1 PW 1	ES29.1	na	1997
130	emf	33	1960	14.0	0.7	2	PO 6 MS 3 B 1	ES18.2	na	1997
131	emf	22	1913	16.0	0.8	3	MH 3 MS 3 BY 2 OR 1 B 1	ES29.2	na	1997
133	emf	22	1913	16.0	0.8	3	MH 3 MS 3 BY 2 OR 1 B 1	ES29.2	na	1997
135	emf	12	1935	15.0	0.8	X	SW 4 BW 2 BY 2 B 1 MH 1	ES18.1	na	1997
136	emf	12	1935	15.0	0.8	X	SW 4 BW 2 BY 2 B 1 MH 1	ES18.1	na	1997
150	npeoa	0	0	0.0	0.0	---	River system-beaver ponds		na	2007
152	emf	12	1935	15.0	0.8	X	SW 4 BW 2 BY 2 B 1 MH 1	ES18.1	na	1997
153	emf	22	1905	19.0	0.6	2	MH 4 BY 2 PW 2 B 1 SW 1		na	1997
154	npeoa	0	0	0.0	0.0	---	River system-beaver ponds		na	2007
155	emf	22	1945	16.0	1.0	1	MH 6 MS 2 IW 1 OR 1	ES29.1	na	1997
156	emf	22	1945	16.0	1.0	1	MH 6 MS 2 IW 1 OR 1	ES29.1	na	1997
157	emf	22	1945	16.0	1.0	1	MH 6 MS 2 IW 1 OR 1		na	1997
162	emf	22	1955	13.0	1.0	1	MH 5 BW 2 BY 1 MS 1 OR 1		na	1997
163	emf	22	1895	21.0	1.0	1	MH 5 BY 2 OR 2 MS 1		na	1997
164	emf	22	1955	13.0	1.0	1	MH 5 BW 2 BY 1 MS 1 OR 1		na	1997
180	emf	22	1945	16.0	1.0	1	MH 6 MS 2 IW 1 OR 1		na	1997

H&B 7.7 Wildlife Species Noted

Table 48: Significant Wildlife Habitat Features - Headwaters & Burke

Property	General Location	Significant Wildlife Feature	Importance
Headwaters	SW and NE wetlands	Beaver and waterfowl are present in the areas	Excellent wetland habitat for beaver and muskrat as well as a number of duck species
	Central Block	With recent harvesting new browse will be available	Mainly tolerant hardwood forest interspersed with a number of wetland valleys which will provide good habitat deer, moose, black bear and a range of avian species
Wildlife Species Noted	Beaver, porcupine, moose, deer, black bear, other common small mammals and birds.		
Burke	South central and central northeast	Major wetland travel corridor	Beaver ponds and adjacent wetland shores provide excellent habitat for water-based mammals and waterfowl. Also travel corridor for larger ungulates and bear. Excellent transition to mature hardwood forest supporting a variety of avian species.
	SW corner	Poplar forest type	Ruffed grouse will make use of the area.
	Remainder of the block- Northwest corner& West	Mature tolerant hardwood forest	**TBD - Extremely limited access opportunity at present time (winter)**
Wildlife Species Noted	Beaver, porcupine, moose, deer, black bear, other common small mammals and birds.		

H&B 8.0 Forest Management Activities 2018-2027 (10 Yrs)

Table 49: Section 8 - Forest Management Activities 2018-2027 - Headwaters

Comp. Number	Objectives *(In no particular order)*	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, hectares thinned)		Year Scheduled	Comments
		Description of Activity	Quantifiable Measure		
110, 100	Environmental, Watershed Protection	Repair or replace culverts	2	Year of harvest	Liability for recreational users and failing water passage
110, 112, 113, 114, 116, 117, 119	Education, Financial Stability, Environment, Forest Health, Wildlife	Develop and implement silvicultural prescriptions for selection and uniform shelterwood harvesting on stands to improve forest health	approx.100 acres	2018-2023	Use certified tree markers and R.P.F with appropriate qualifications to implement contractors. See Appendix B for Guidelines
All	Environmental, Watershed Protection, Financial Stability, Forest Health	Use high visibility & durable product, mark property boundary to prevent trespass.	4.8 km	2018 and 2023	Active logging in the area requires highly visible boundaries. Use UV stable pink or red flagging tape and paint. Maintenance required every 5 yrs

Notes: Many activities for this property are common to ALL SSMRCA properties and can be found in Table 4 in Section 8.1

H&B 9.0 Forest Management Activities 2008-2017 (10 Yrs)

Table 50: Section 9a - Report of Past Forest Management Area Activities 2008-2016 (2017 pending) - Headwaters

Comp. Number	Objectives	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, trees planted, hectares thinned)		Year Accomplished
		Description of Activity	Quantifiable Measure	
100	Environmental, Watershed Protection, Recreation	• Repair or replace culverts	2	---
108, 110, 112-4, 116-7, 119	Self Sustainable, Environment, Education, Community	• Inventory and PHSP for recommended areas from last 10-year plan	8 comp. & ~120 ac.	---
All	Environmental Watershed Protection	• Property boundary marking to prevent trespass - 1 staff & **1 volunteer**	4.8 km	2007

Table 51: Section 8 - Forest Management Activities 2018-2027 - Burke

Comp. Number	Objectives *(In no particular order)*	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, hectares thinned)		Year Scheduled	Comments
		Description of Activity	Quantifiable Measure		
121, 124, 155-7	Financial Stability, Environment Education, Forest Health	Inventory and PHSP for recommended areas from last 10-year plan	approx. 100 acres	TBD on access	Partnership with SC if possible. PHSP, if recommended to amendment stage in Section 5.3
All	All	Gain legitimate access	1 route	2018	Contact private landowners
All	Environmental, Watershed Protection, Financial Stability, Forest Health	Property boundary marking to prevent trespass.	4 km	2018 and 2023	Active logging in the area requires highly visible boundaries

Notes: Many activities for this property are common to ALL SSMRCA properties and can be found in Table 4 in Section 8.1.

Table 52: Section 9a - Report of Past Forest Management Area Activities 2008-2016 (2017 pending) - Burke

Comp. Number	Objectives	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, trees planted, hectares thinned)		Year Accomplished
		Description of Activity	Quantifiable Measure	
121, 124, 155-7	Self Sustainable, Environment, Education, Community	Inventory and PHSP for recommended areas from last 10-year plan	~100 ac.	---
All	All	Gain legitimate access from North or West	1 route	---
All	Environmental, Watershed Protection	Property boundary marking to prevent trespass.	4 km	2008

Table 53: Section 9b - Report of Past Forest Management Area User Activities 2008-2016 (2017 pending) - Headwaters & Burke

Objectives	Activity	
	User Group	# of Events/Attendees
Recreation **Social, Cultural, Educational (Research)**	**Recreational Groups** • Staff lead snowshoe/ski outing with Sault Naturalists Club on Burke property	2 events / ~15 participants

APPENDICES

Appendix A

Administration

Sample Annual Work Schedule
Sample Tender Form
Sample Tender Agreement
Tree Species List & FRI Abbreviations
Glossary of Forestry Terms

Appendix A - Sample Annual Work Schedule

Annual Work Schedule for 20__ Fiscal/Calendar Year

	MFP Activity		Plan Completion Date	Responsible Agency	Date Completed	Signing Rep
Forest Maintenance	EMS route inspections & Hazard Tree Inspection and Removal on marked trails		May 30			
			August 31			
			November 30			
	Inspection, Repair or Replacement of:	locks (oiling)	May			
		gates				
		fences				
		signs (perimeter)				
		posts				
	Trail Brushing		June 30			
	Property Boundary Marking					
	Garbage Clean up		ongoing			
Forest Operations	Wildlife Inventory					
	Forest Inventory					
	Pre-Harvest Silvicultural Prescription (PHSP)					
	Tree Marking (ideally by March 30-weather pending)		September 30			
	Tendering (Contracts awarded)		Ongoing			
	Harvesting Auditing		1 for each week of operations			
	Cut Inspection Report		As Reqd			
Forest Admin.	Annual Report		January 31			
	Annual Work Plan		August 15			
	Annual Budget		August 15			

Appendix A - Sample Tender Form

Tender for Forest Products
Lump Sum Sales

Tender Number
Date Issued (Year/Month/Day)

Return completed tender forms within the enclosed postage-paid envelope.

The undersigned tenders for timber according to the attached conditions of sale and located as outlined on the attached map and described as follows:_____

_____

_____

_____

Tenders must be received at the office listed above by _____ o'clock A.M. local time on_____at_____

Tenders will be opened publicly and read at ____ o'clock A.M. on _____ at _____

Further information may be obtained by contacting_____

The following/attached is offered for sale.

Species	No. of Trees	Avg. Diameter	Est. Volume	Species	No. of Trees	Avg. Diameter	Est. Volume	
								Total Lump Sum Purchase Price Bid
								G.S.T. (%)

Total Estimated Volume (Volume is estimated and not guaranteed)	Grand Total

Sales with a Grand Total of $1,000 or less to be paid in full with the tender. For sales with a Grand Total greater than $1,000, submit 25% of Grand Total as a deposit with the tender. Do not send cash. Make cheques payable to SSMRCA.

Amount Enclosed	

Enclosed is certified cheque (or money order) as required, in the amount of _____.

The balance of payment (if any) is to be paid by the successful bidder prior to the commencement of operations. Final payment may be made by certified cheque or money order.

The highest or any tender not necessarily accepted. The SSMRCA may accept the tender in whole or in part, whether the price or prices be the highest or not, and may reject any or all tenders.

The Undersigned (Purchaser) is fully aware of the aforementioned terms and attached Timber Sales and Cutting Agreement Terms and Conditions. The tender is submitted in accordance with said conditions and should this tender be accepted, the undersigned agrees to comply with these terms and conditions.

Full Legal Name of Business			Area Code Telephone No.
Business Address (Street)			City, Town or Village
Province	Postal Code	Authorized Signature	Name (Please Print)

Notes:

H.S.T. must be added to the bid price. A proponent without a H.S.T. number does not disqualify the proponent from adding H.S.T. to the bid

Appendix A – Sample Tender Agreement

NOTICE TO ALL TENDERERS

TIMBER SALES AND CUTTING AGREEMENT TERMS AND CONDITIONS

The Occupational Health and Safety Act

In order to avoid any misunderstanding as to the nature of the work to be performed herein, the Purchaser, by executing this purchase and timber cutting agreement unequivocally acknowledges that he is the Purchaser within the meaning of the Occupational Health and Safety Act and amendments thereto.

Purchasers shall be responsible to:

- Demonstrate establishment and maintenance of a health and safety program with objectives and standards consistent with applicable legislation.
- Include health and safety provisions in their management systems to reach and maintain a consistently high level of health and safety.
- Ensure that workers in their employ are qualified in cutter-skidder operator competency-based training standards, aware of hazardous substances that may be in use at place of work and wear appropriate personal protective equipment.
- Upon request at any time from tender award to completion of timber cutting agreement, submit proof of fulfilment of above responsibilities.

The Purchaser agrees that the SSMRCA or its representative can conduct a safety inspections of the project/cutting site at any time during the duration of the timber cutting agreement and document safety requirements.

Workplace Safety Insurance Board (WSIB)

- The Purchaser shall submit with the tender document a satisfactory clearance from the Workplace Safety Insurance Board stating that all assessments or compensation payable to the Workplace Safety Insurance Board have been paid.(Clearance)
- The Purchaser also agrees that at any time during the performance or upon completion of the work, to furnish a satisfactory certificate from the Workplace Safety Insurance Board, as outlined in(3)(a), if requested.
- The Purchaser shall submit with the tender document a current copy of their WSIB accident frequency rate (CAD-7).

The Purchaser further agrees to the following:

To indemnify and save harmless the SSMRCA from and against all claims, demands, loss, costs, damages, actions, suits or other proceedings by whomsoever made, brought or prosecuted for any damage or injury to persons or property occasioned in the carrying on of the operations of the Purchaser under this agreement or by any neglect,

misfeasance, or nonfeasance on the Purchaser's part or on the part of persons employed by him/her or under his/her control.

That the SSMRCA is released from any and all claims for injury or damage to property, however caused, which may be sustained by the Purchaser or his/her employees while carrying operations anywhere on the property under this agreement.

During the entire term of this contract, the Purchaser agrees to have in force a general public liability and property insurance policy or policies subject to limits of not less than two million dollars ($2,000,000.00) for each occurrence that protects the SSMRCA and the Purchaser against any claim arising out of any act of omission of the Purchaser, any employee, subcontractor or agent of the Purchaser, or any of them, in performance or intended performance of this contract. The insurance shall be in the joint names of the Contractor and the Owner and shall also cover as Unnamed Insured, all Subcontractors, agents and anyone employed directly or indirectly by the Contractor or his Subcontractors. The SSMRCA is to be named as an additional insured on the above policy. The Purchaser shall, upon request, provide written proof of such insurance prior to the commencement of any work.

That all trees harvested by the Purchaser or his/her contractor shall be only those trees marked (designated) as specified in this contract. If any trees are cut which have not been designated for harvest, it will be considered a breach of this agreement.

To cut trees in such a manner as to leave evidences of butt marking (yellow) so that the stump heights are not higher than the diameter of the stump, to a maximum of 30 cm.

To utilize and remove all merchantable wood 2.54 metres and longer as follows:
in plantations down to 12 cm diameter outside bark top end.
in natural stands down to 10 cm diameter outside bark top end.

To fell and skid all trees designated for harvest to minimize damage to the residual stand and to prevent unnecessary damage to young growth and other trees not designated for cutting. Whole tops shall not be skidded. Work must be conducted in a professional, business-like manner.

To not plan or undertake any operations which may result in damage to the forest site in terms of undesirable disturbance, drainage impairment, productivity loss or disease without prior consultation with SSMRCA or its agent.

To repair to original condition immediately after logging operations have been completed, all damage caused by logging to roads, trails, fences, culverts, bridges, utilities or other improvements damaged beyond ordinary wear and tear.

To have in place signs (supplied by the SSMRCA) at all access points to the logging operation warning the public of the danger. Signs must be in place prior to the commencement of operations and must be removed at the end of each day.

That if any of the timber is lost through theft, or destroyed or devalued in any way by fire, hurricane, tornadoes, lightning, ice storms, insects or diseases, during the term of this agreement, such losses shall be borne entirely by the Purchaser.

That all trees designated for harvest shall be felled to the ground. Partially severed standing trees and lodged trees must be pulled to the ground by the Purchaser daily.

That all tops and slash are to be cut to within 1.2 metres of the ground. All such logging debris is to be cleared from all roads, trails, watercourses, and property adjoining the woodlot. Roads and trails are to be kept passable at all times.

That no garbage, litter or waste of any kind will be left on the property during or after the operation.

Not to assign this contract to a third party, in whole or in part, without prior written consent of the SSMRCA.

To obtain at his/her expense all permits from public authorities which may be required in connection with the performance of this contract and to comply with all municipal, provincial, federal and other laws, statutes, ordinances and requirements.

To pay as liquidated damages and not as a penalty:
a sum of $500.00 per tree for each unmarked tree which is cut, destroyed or damaged by the operator or their employees;
a sum of $50.00 for each lodged tree;
a sum of $10.00 for each high stump as described in condition 9;
a sum of $2.00 for each piece of merchantable timber as described in condition 10;
a sum of $20.00 for each tree left standing that was authorized for cutting.

The purchaser agrees to reimburse the SSMRCA for extra trees that may be marked upon agreement of both parties after the signing of this Agreement to accommodate landings and access on the property. Payment to be based on tendered or negotiated amount per cubic metre with payment to be received by the SSMRCA within two months of invoice date.

To take all necessary steps to prevent and to suppress any forest fire on the tender sale area, and to have on hand one shovel and one axe for every two people employed in the forest. All equipment must have integral fire suppression equipment. In the event of fire, the Purchaser will immediately notify the closest fire department and the SSMRCA and will endeavour to control and extinguish the fire.

Should fire hazard conditions warrant, the purchaser agrees to suspend operations until such time as the SSMRCA deems advisable.

The SSMRCA or its representatives retain the right to conduct inspections in person and/or assign an agent to conduct inspections of the cutting operations from time to time and to order the immediate cessation of all work if any violation of this contract occurs.

To telephone the SSMRCA or the identified representative, agent, contacted consultant at least 5 days prior to the commencement of any part of the logging operations.

The operating period will be for one calendar year ending December 31, 20__, after which all operations must cease and all uncut wood, cut and/or piled wood will revert back to the SSMRCA. No refunds will be granted. Additionally, no cutting or other woods operations will occur between March 15 and June 30th, and no operations will occur on weekends or holidays unless authorized in writing by the SSMRCA.

In case of any dispute as to the meaning of any of the provisions of this agreement, the SSMRCA and the Purchaser agree to submit such dispute to arbitration in accordance with the Arbitration Act. Each contracting party will select one arbitrator and two arbitrators selected shall select a third arbitrator, and the decision of the arbitrators shall be final.

Appendix A - Tree Species List & FRI Abbreviations [3]

Abbreviation	Tree Species
Ab	black ash *(Fraxinus nigra)*
Sm	mountain ash *(Sorbus americana)*
Aw	white ash (*Fraxinus americana)*
Bd	basswood *(Tilia americana)*
Be	American beech *(Fagus grandifolia)*
Bf	balsam fir *(Abies balsamea)*
Bn	butternut *(Juglans cinerea)*
Bw	white birch *(Betula papyrifera)*
By	yellow birch *(Betula alleghaniensis)*
Cb	black cherry *(Prunus serotina)*
Cw	Eastern white cedar *(Thuja occidentalis)*
Jc	common juniper (*Juniperus communis*)
Dalt.	alternate leaf dogwood *(Cornus alternifolia)*
Dr	red osier dogwood *(Cornus sericea)*
Eb	elderberry *(Sambucus canadensis)*
Ew	American (white) elm *(Ulmus americana)*
He	Eastern hemlock *(Tsuga canadensis)*
Hi	bitternut hickory *(Carya cordiformis)*
Ht	hawthorn *(Crataegus spp.)*
Id	ironwood *(Ostrya virginiana)*
La	tamarack *(Larix laricina)*
Lb	black locust *(Robinia pseudoacacia)*
Le	European larch *(Larix decidua)*
Mh	hard maple *(Acer saccharum)*
Ms	soft maple *(Acer rubrum)*
Ob	bur oak *(Quercus macrocarpa)*
Or	red oak *(Quercus rubra)*
Pj	jack pine *(Pinus banksiana)*
Po	poplar all *(Populus spp.)*
Pp	pin cherry *(Prunus pensylvanica)*
Pr	red pine *(Pinus resinosa)*
Pv	choke cherry *(Prunus virginiana)*
Pw	Eastern white pine *(Pinus strobus)*
Rt	staghorn sumac *(Rhus thyphina)*
Sn	Norway spruce *(Picea abies)*
Sr	red spruce *(Picea rubens)*
Sv	serviceberry *(Amelanchier spp.)*
Sw	white spruce *(Picea glauca)*
Wb	black walnut *(Juglans nigra)*
Wi	willow *(Salix sp.)*

[3] OMNR. 2004. Ontario Tree Marking Guide, Version 1.1. Ont. Min. Nat. Resour. Queen's Printer for Ontario. Toronto. 252 p https://dr6j45jk9xcmk.cloudfront.net/documents/2807/guide-treemarking.pdf

Appendix A - Glossary of Forestry Terms [4]

AGS (Acceptable Growing Stock):
Trees suitable for retention in the stand for at least one cutting cycle (15-25 years). They are trees of commercial species and of such form and quality as to be sellable for sawlog products at some future date. The designation itself is not a cut/residual decision. Some AGS will be cut in a stand, as will some UGS be left as residuals.

Basal Area (B.A.):
A measurement used to describe the density of a forested area. The combined area of the growing stock measured at breast height per unit area.

D.B.H. (Diameter Breast Height):
The diameter of a tree taken at breast height (1.3 m).

Dominant:
Generally an individual or species of the upper layers of the canopy.

Even-aged:
Applies to stands or forests in which relatively small age differences exist between individual trees. The maximum difference in age is usually twenty years.

Forest Inventory:
A survey of an area to determine such data as area, condition, timber, volume, and species for specific purposes such as planning, purchase, evaluation, management or harvesting.

Harvesting:
The removal of forest products for utilization, comprised generally of developing access, cutting, sometimes initial processing and extraction.

Improvement Cutting:
The elimination or suppression of less valuable trees in favour of more valuable tree growth, typically in mixed uneven-aged forest.

Pathogen:
An organism, essentially microscopic, or a virus, directly or indirectly capable of causing disease in trees.

Pest:
An organism, more particularly an insect or one of the mammalia, capable of causing material damage to trees and potentially a forest stand.

[4] Compiled from numerous sources

Regeneration:
The renewal of a tree crop whether by natural or artificial means. This term may also be used to describe the young crop itself.

Selection Cut:
The removal of mature and/or undesirable trees individually or in small groups at relatively small intervals (20 to 25 years).

Selection System:
An uneven-aged silvicultural system where mature and/or undesirable trees are removed individually or in small groups over the whole area, usually in the course of a cutting cycle. Regeneration is generally natural.

Shelterwood Cut:
The removal of mature trees in a series of two or more cuts (preparatory, seed, removal, final) whether by cutting uniformly over the entire stand area or in narrow strips.

Shelterwood System:
An even-aged silvicultural system where mature trees are harvested in a series of two or more cuts for the purpose of obtaining natural regeneration under shelter of the residual trees, whether by cutting uniformly over the entire stand area or in narrow strips. Regeneration is natural.

Silvics:
The study of the life history and general characteristics of forest trees and stands with particular reference to locality factors, as a basis for the practice of silviculture.

Silviculture:
The theory and practice of controlling the establishment, composition, constitution, and growth of forests.

Silviculture System:
A process, following accepted silvicultural principles, whereby crops constituting forest are tended, harvested, and regenerated, resulting in the production of crops of distinctive form and composition.

Site:
An area considered in terms of environment, particularly as this determines the type and quality of the vegetation the area can carry.

Site-Class:
A measure of the relative productive capacity of a site for a particular species. The average height at a given age is generally the basis for classification.

Stand:
A community of trees possessing sufficient uniformity in composition, constitution, age arrangement, or condition to be distinguishable from adjacent communities, so forming a silvicultural or management entity.

Stand Density:
Quantitative measure of a stand in terms of basal area, number of trees, or volume per unit area.

Stocking:
An expression of the adequacy of tree cover of an area, in terms of crown closure, percentage of stocked quadrants, number of trees, basal area, or volume, in relation to a pre-established managerial norm.

UGS (Unacceptable Growing Stock):
These trees do not have the potential to make sellable sawtimber products in the future, but may have merchantable products now. They may be high risk trees; trees with disease, damage, or dieback that threatens their survival, or trees of such poor form that they are removed regardless of the effect that removal will have on stand structure and species composition.

Uneven-Aged:
Stands or forests in which trees markedly differ in age.

APPENDIX B

Operational

Cut-Inspection Report
Example Stand Prescription
Tree Marking Guidelines
Compartment Inventory Procedures

Appendix B - Cut Inspection Report

General Information		
Name of Operator:	Start Date:	End Date:
Operator Phone No.:	Tender Number:	MGMT Unit:
Type of Marking (attach copy of the silvicultural prescription):		
Special Operating Conditions:		
Type of Harvesting Equipment:		

Specific Infractions	Yes	No
1. Stump heights exceeded 30 cm.		
2. A) Leaving merchantable timber 10 cm diameter outside bark top end and 2.54 m or longer for natural stands.		
B) Leaving merchantable timber 12 cm diameter outside bark top end and 2.54 m or longer for plantations.		
3. Leaving marked trees standing.		
4. Leaving lodged trees.		
5. Cutting of unauthorized trees.		
6. Unnecessary damage to regeneration or more than 33% of seedlings broken		
7. Garbage, oil spills or litter left on premises.		
8. Damage to residual trees larger than 10 cm DBH: A) Primary stem broken, any other major limb or over 33% of the crown. B) Uprooted more than 25% root system or lean over 10 degrees. C) Stem wounds greater than 33% of the circumference.	See tally sheet	
9. Unnecessary rutting of trails or landing damage.		
10. Excessive number of skid trails or trail widths.		
11. Excessive logging debris on trails and greater than 1.2 m in forest.		

Other General Infractions	Yes	No
12. All 'Danger - Logging Operation in Progress' signs are present at all entrance points (trails and roads) to harvesting area with at least a 50m buffer to the harvesting area.		
13. Occupational Health and Safety requirements have been met.		
14. Special operating conditions have been followed.		
15. Other		

Report Details			
Copy of report left with company (circle)	Yes	No	Specify:
Overall Quality of Operation:	Good	Satisfactory	Marginal Poor
Comments:			
Any Penalties Recommended (circle)	Yes	No	Potential:
Comments:			

1. Attach a sketch map, and/or photos of the area inspected with each report.
2. Complete 1 report for each week of operations.

Inspector

Name:	Title:	Date:

Appendix B - Example Stand Prescription

Example Silvicultural Prescription

Stand: Hiawatha East - 178 **Number of Plots:** 8 **Cruised by:** B. Attwell; SC students
Area: 22.95 acres **Prism (m2):** 2 **Date:** 21-Jan-17

Average Height: 23 metres **Regeneration:** Mainly Sugar Maple (.1-1m)
AGS % 36% **Soils/Landform:** Till with shallow over bedrock components
UGS % 64% **Topography:** Gently rolling with some hills
Access: Approximately 3 kms from East Hiawatha parking lot. With some grading improvements, road will be feasible.

Stand Information											
Tree Size Class >>>>	POLEWOOD 10-24 cm		SAWTIMBER SIZES: SMALL 26 - 36 cm		MEDIUM 38 - 48 cm		LARGE 50 cm +		TOTAL ALL SIZES		Species Comp %
SPECIES	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	
Mh	11	16	7	11	6	11	1	6	25	44	68%
Mr	2	2	1	1	2	3		1	5	7	12%
By		1	1	2	2	3	2	8	5	14	19%
Bf	1								1	0	1%
TOTAL NUMBER OF TREES	14	19	9	14	10	17	3	15	36	65	
BA (m^2/ha)	3.5	4.8	2.3	3.5	2.5	4.3	0.8	3.8	9.0	16.3	
TOTAL BA(m2/ha)	8.25		5.75		6.75		4.50		25.25		
TARGET BA (m2/ha)	6		4		4		2		16		
IDEAL BA (m2/ha)	6		6		4		2		18		

Stand Quality Notes: This tolerant hardwood stand has not been cut in the last 30+ years and is on the borderline of Uniform Hardwood Shelterwood Cut. Some major sporous diseases were found but not in significant quantities.

Forest Objectives: To improve the long-term forest health and forest product value while exceeding the OMNRF standards for wildlife and environmental protection values.

Silvicultural System Recommended: Selection with some group selection in high quality Yellow Birch and low quality Sugar Maple areas. Release AGS polewood on two sides to increase growth rates. No AGS to be removed unless significant clusters.

Tree Marking Targets:

POLEWOOD 10-24 cm	SAWTIMBER SIZES: SMALL 26 - 36 cm	MEDIUM 38 - 48 cm	LARGE 50 cm +
Remove 1 in 4 trees	Remove 1 in 3 trees	Revome 1 in 3 trees	Remove 3 of 5 trees

Products: As a result of this being the first improvement cut, this sustainable harvest will remove approximately 80% pulpwood and 20% sawlog.

IRM Instructions:
AOC of 30 m on creek and 100 m on lake.
AOC of 30 m on private land to North.
Retain all conifer encountered
Retain all mast trees encountered
Retain 1 supercanopy per 4 ha
Retain 10 cavities and 10 veteran trees per ha

Timing of Harvest: Late summer to winter possibilities

Appendix B - Tree Marking Guidelines[5]

1. All marks should be distinct and direction of marking should be consistent to facilitate continuous marking and subsequent harvesting.

2. All stump marks should be placed in an area protected from skidder tires, cables, etc.

3. The following colours will be used:
   -trees to be removed - yellow/orange
   -crop or reserve trees - blue

4. Place a complete ring around the tree at1.3 -1.5m above ground level, plus one distinct vertical slash at the base of the stump approximately 30 cm long.

5. When marking adjacent to external or internal fences, hydro-lines etc. and/or next to another property owner, do not mark trees that will, when cut, fall across or over these types of lines/boundaries.

6. Two A.G.S. trees adjacent to one another having a crown spread of 180 degrees each may be retained.

7. Acceptable growing stock may be marked only if its subsequent removal will improve the spacing of the residual higher quality tree.

8. In areas of the stand where only poor stems (U.G.S.) are present, openings may be created. Openings should not exceed 30m x 30m with no more than one per hectare.

9. No marking of conifers in hardwood stands as the Algoma Region contains an average of 6.5 conifer per ha. The goal is to reach a minimum of 10 conifer per hectare.

10. No marking of mast species (Red Oak, Ironwood) as they are important food sources and in their northern limits on the CA properties.

11. Appropriate buffers for water bodies will follow MNRF guidelines on crown land. A minimum of 30m will buffer private land unless neighbouring landowners have

[5] OMNR. 2004. Ontario Tree Marking Guide, Version 1.1. Ont. Min. Nat. Resour. Queen's Printer for Ontario. Toronto. 252 p https://dr6j45jk9xcmk.cloudfront.net/documents/2807/guide-treemarking.pdf

agreed on boundary locations. These will be put in place before tree marking begins.

Most habitat management in Ontario currently involves identifying site specific habitat values (or critical habitats) and protecting these by modifying forest management activities within an appropriate area-of-concern. Many of these will be identified in the forest management plan and should be reflected in the prescription for a stand. However, some critical habitats may not be identified at the planning stage and will not be addressed within the prescription for a stand (e.g. some stick nests, intermittent streams and seepages). Markers must be on the look out for these habitats.

Stick Nests

Stick nests are platforms made of sticks or twigs that are used by large birds for nesting. Stick nests are an important habitat resource for wildlife because those built by species such as red-shouldered hawks are used repeatedly. Moreover, once abandoned, stick nests may be used by birds that do not build their own nests (e.g. Great horned owl). Thus, all trees containing stick nests are important and should be retained.

- Identify and fill out a stick nest form with GPS coordinates. Use red flagging to mark AOC boundary according to Forest Raptors handbook.
- Establish a minimum no-cut reserve of 1 tree length in radius around each inactive stick nest which falls within the modified management area.
- Establish a minimum no-cut reserve of 1 tree-length in radius around any inactive stick nest which falls outside the main reserve or the modified management area.
- Avoid working in the reserve or MMA between March 1 and July 31.
- Notify the district biologist if an active or inactive raptor nest is found.

Seepages and Small Streams

Small (includes intermittent) streams and seepages within allocated stands are rarely identified prior to operational marking. These watercourses and their associated riparian zones are important habitats. Modification of marking immediately adjacent to intermittent streams and seeps to minimize the amount of physical disturbance to the stream bed and surrounding riparian zone mat be required. Canopy closure of 70% should be retained in these areas.

Generic Habitat Concerns

Some stands will contain site-specific habitat features, others will not. Habitat values must be considered in these stands. These include cavity trees, mast trees, conifer

cover, conifers in hardwood stands, hardwoods in conifer stands and supercanopy trees.

Cavity trees:

- retention of at least 10 cavity trees/ha in all selection, shelterwood, and seedtree cuts
- cavity trees to be retained must all be at least 25 cm dbh (with at least 1 cavity tree/ha that is 40+ cm dbh)
- trees are to be retained in the following order of priority based on the type of cavity they contain:
    1) pileated woodpecker roost cavities - large trees (40 cm+ dbh) which are hollow and have at least two excavated holes, these holes are somewhat oval, 7.5 cm to 10 cm wide and 10 to 12.5 cm high
    2) pileated woodpecker nest cavities - large trees (40 cm+ dbh) with white spongy heart rot and have one or more excavated nest chambers,
    3) other woodpecker nest cavities or maternal den cavities - these entrance holes are generally circular, and <10 cm in diameter
    4) escape cavities - cavities that are not ideal nest or den sites but could be used by wildlife as temporary shelter or escape from predators
    5) woodpecker feeding excavations and
    6) potential cavities - retain living trees with the potential to develop into cavity trees.
- retain cavity trees that provide multiple wildlife benefits

Mast trees:

- mast refers to the edible fruits of both overstory and understory plants,
- important mast-producing trees include red oak, beech, basswood, black cherry, and ironwood,
- bigger is not always better, most species reach a peak in seed production during middle age
- try to retain trees of seed bearing age with large, rounded, vigorous crowns

Conifer cover:

- extremely important component for deer
- provides important thermal cover for deer by blocking wind and trapping radiated heat
- conifer canopy closure of 80% should be retained on knolls that provide good potential bedding sites for deer
- clumps of 3 to 5 conifers, at least 10 m tall should be remained intact, these clumps should be spaced 30 to 60 m apart

Scattered conifers in hardwood stands:

- conifer pockets are important habitats for furbearing animals and birds
- stands with <1m^2/ha conifer basal area, retain all conifers that may provide thermal cover, nest sites or act as a seed source

- stands with 1+m^2/ha of conifer basal area, treat conifers as AGS hardwoods

Scattered hardwoods in conifer stands:
- retain oaks in conifer stands to provide mast
- retaining some poplars in conifer stands will also improve wildlife habitat

Supercanopy trees:
- these are trees that stick up above the main canopy stand
- their open crowns make ideal nest and perch site for large raptors
- supercanopy pine (or hemlock) 50 cm+ dbh /16ha for raptors should be left

Appendix B - Compartment Inventory Procedure

For updating the current forest information for compartments on the SSMRCA property that were reasonably determined to require silvicultural tending, the following procedures were used:

- $2m^2$ basal area prisms were used on all stands inventoried;
- Each compartment had a minimum of 8 prism points;
- Plots were established 50 to 60 m apart;
- Cruises were stratified to encompass topography and site characteristics;
- Some adjacent stands with similar composition were merged;
- At each prism point, the following data was recorded:
    - Tree species;
    - Tree diameter size class (Polewood, Small, Medium or Large Sawlog);
    - Co-dominant heights (if current data seemed incorrect);
    - Acceptable Growing Stock (AGS) or Unacceptable Growing Stock (UGS);
- Basic operational notes were made to explore feasibility;
- Regeneration notes were taken for Uniform Shelterwood and Group Selection compartments;

APPENDIX C

Reference Materials

Forest Management Reference – Guides and Guidelines

Appendix C - Forest Management Reference – Guides and Guidelines

Implementation manuals include the following provincial guidelines, construction/operational manuals and resource/environmental manuals:

MNRF. Apr. 2000. Forest Operations and Silviculture Manual,

MNRF. 2000. A Silvicultural Guide to Managing Southern Ontario Forests,

MNRF. 2003. Old Growth Policy for Ontario's Crown Forests

MNRF. 1998. Forest Raptors and their Nests in Central Ontario - A Guide to Stick Nests & their Users,

MNRF. 2004. Ontario Tree Marking Guide v1.1

MNRF. Nov 2009. Forest Management Planning Manual for Ontario's Crown Forests

MNRF. Nov 2009. Forest Resource Inventory Technical Specifications.

MNRF. Mar. 2010. Natural Heritage Reference Manual

MNRF. 2011. A land managers guide to conserving habitat for forest birds in southern Ontario

MNRF. May 2014. Forest Management Guide for conserving Biodiversity at the Stand and Site Scales

MNRF. May 2015. Forest Management Guide for Great Lakes-St Lawrence Landscapes

MNRF. May 2014. Environmental Guidelines for Access Roads and Water Crossings

MNRF. 2015. Forest Management Guide to Silviculture in the Great Lakes-St Lawrence and Boreal forests of Ontario

MNRF. 2015. Climate Change Projections for Ontario. An updated synthesis for policymakers and planners CCRR-44

APPENDIX D

Databases

Section 9 - **ALL Properties** - Report of Past Forest Management Activities 2018-2027

Section 9a - Report of Past Forest Management Area Activities 2018-2027 - ***Specific Management Area***

Section 9b - Report of Past Forest Management Area User Activities 2018-2027 - ***Specific Management Area***

Digital References/Databases

Appendix D - Section 9 – ALL Properties - Report of Past Forest Management Area Activities 2018-2027

Compart-ment	Objectives	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, trees planted, hectares thinned)		Year Accomplished
		Description of Activity	Quantifiable Measure	
		•		
		•		
		•		
		•		
		•		
		•		

Appendix D - Section 9a - Report of Past Forest Management Area Activities 2018-2027 - *Specific Management Area*

Compart-ment	Objectives	Specific Prescription of Activity with quantifiable measurement (e. g. metres of trail constructed, trees planted, hectares thinned)		Year Accomplished
		Description of Activity	Quantifiable Measure	
		•		
		•		
		•		
		•		
		•		
		•		

Appendix D - Section 9b - Report of Past Forest Management Area User Activities 2018-2027 - *Specific Management Area*

Section 9b - Report of Past Forest Management Activities 20___-20___

*Objectives			User Group	Year(s)	~ Number of		~$
1st	2nd	3rd			Volunteers	Attendees	Fees
			Educational Institutes				
			Recreation Groups				
			Youth Groups				
			Government / Industry				
			Other				
				Summary			

Note: *Objectives:

1. Watershed Protection
2. Long Term Forest Health
3. Environment
4. Financial Stability
5. Wildlife Habitat
6. Recreation
7. Community Involvement and Communications
8. Social, Cultural, Research and Educational

APPENDIX E

Public

SSMRCA Partner/User list & Environmental Partners
Managed Forest Plan Public Information Centre Input Summary

Appendix E – SSMRCA Partner/User list & Environmental Partners

Partner/User list

49TH Field Regiment/Army/Air Cadets
Algoma District School Board (ADSB)
Algoma Public Health (APH)
Algoma Rod & Gun Club
Algoma University (AU)
Boy Scouts/Rovers/Cubs
Canadian Mental Health Association
City Sault Ste. Marie/Recreation and Culture
Clean North
Environment Canada/Great Lakes Basin Air Monitoring
Francophone Association of Sault Ste. Marie
Girl Guides/Brownies
Great Lakes Forestry Service (Natural Resources Canada)
Huron-Superior Catholic District School Board (H-SDSB)
Invasive Species Centre (ISC)
Kiwanis Club of Sault Ste. Marie
Local Citizen's Committee
Ministry of Natural Resources and Forestry (MNRF)
Mocking Bird Hill Farm
Movie Production Companies
Ontario Finnish Resthome Association
Ontario Forest Research Institute (OFRI - MNRF)
Ontario Woodlot Association (OWA)
Sault College (SC)
Sault Cycling Club
Sault Naturalists
Sault North Archery
Sault Search and Rescue
Sault Ste. Marie Police Service
Sault Trailblazers/OFSC
Sault Trapper's Association
Searchmont and Area Freestyle Alliance
Soo Finnish Nordic Ski Club
TD Friends of the Environment/Tree DaysTrees Ontario (aka Forests Ontario)
United Way, Sault Ste. Marie
Voyageur Trail Association (VTA)
YMCA

Environmental Partners

Algoma Public Health (APH)
Algoma University (AU)
Bird Studies Canada – Marsh Monitoring Program
Environment Canada/Great Lakes Basin Air Monitoring
Great Lakes Forestry Service (Natural Resources Canada)
Invasive Species Centre (ISC)
Ministry of Natural Resources and Forestry (MNRF)
Ontario Forest Research Institute (OFRI - MNRF)
Sault College (SC)
Sault Naturalists

Appendix E – Managed Forest Plan Public Information Centre Input Summary

Managed Forest Plan Public Information Centre

Tuesday March 7, 2017

Public Consultation period 30 days

26 registered attendees

	Percentage	# Respondents
Overall expectations:		
About what I expected	86%	6
Better than expected	14%	1
Was the information useful:		
Very	75%	6
Somewhat	25%	2

Key Issues Identified

User conflicts
Public perception of logging activities
Trespass
Climate change
Use of smaller equipment for harvest as opposed to large harvest equipment
Plan use for recreation with forest health and environmental controls
Forest Health – declining stands, overstocked plantations
Increase recreational opportunities esp. mountain biking
Maintain species diversity
Susceptibility to insects and disease
Support for wildlife
Balancing forest health with public perception
Monitoring the harvest
Previous questionable logging practices
Questions as to how tree removal reaches objective of watershed protection, etc.
Proper monitoring of activities esp. compliance with prescribed tree marking, basal wounding of residual trees, surface soil rutting

Methods Suggested to Address Identified Issues

Logging Activity
- Low Impact

- Professional operation
- Restrict timing of operations for frozen conditions
- Retention of desirable basal area in selection stand cuts – don't allow cuts by "monster machines"

Better policing
Use more silvicultural practices

Make cycling a permitted use on all trails
Actively manage the forest with harvest and renewal activities to encourage forest health and generate revenue for management activities.

Forest pest monitoring and BMP to reduce susceptibility to insects and disease.

A public relations program needs to be part of the MFP implementation
Placement of educational signage for the thinning in the Highlands and closure of all access from Fifth Line.

Reference to the Forest Management Committee in the Plan including the FMC be informed of all harvest activities before they occur, opportunity for before, during and after forest activities to ensure compliance.
Clear statements endorsing acceptable logging practices

Stand 107 – suggest the use of shelterwood instead of selection will just increase maple component. Stands 103 and 107 for white pine need exposed mineral soil to gain some natural seed, multiple planting and tending. Stand 81 Harvest in April – shoulder season when there is still snow on ground.

Forest Management Long Term Vision

Public Education
Recreational Opportunities

Keep the current objectives and continue to use forest management principles, "leave alone" should not be the preferred option.

Increased involvement in recreation to prevent illegal activities on properties

Meet existing primary functions while encouraging recreational activities to the extent possible
Actively manage the forest to promote forest health, safety of visitors and provide economic benefit to the SSMRCA

Mature stands
More white pine

Healthy forests, few invasive species
Public recreation with careful use
Trail planning – bike trails established with no planning or regard to native vegetation or forest health

Acceptable reasons for operations other than forest products

Trails	11111	= 5
Hazard removal	1111111	= 7
Insect infestation	111111	= 6
Windthrow	11111	= 5
Forest education	111111	= 6
Forest fire	11111	= 5
Water/flood control	1111111	= 7
Wildlife habitat	111111	= 6
Research	1111	= 4
Forest health	1111111	= 7
Watershed management	1111111	= 7
Access control	1111	= 4