

Michigan Forest Association
6120 S. Clinton Trail
Eaton Rapids, MI 48827
PH-517-663-3423

GOGEBIC COUNTY

T 47 N, R 42 W

Section 14

E ½ of SW ¼

80 Acres

FOREST MANAGEMENT PLAN

PREPARED BY

LANDLOOKER FORESTRY SERVICES

14170 WADAGA ROAD

BARAGA, MI 49908

906-353-6980

January 28, 2016

Plan Writer

Landowner

I _____ hereby acknowledge that I have reviewed this forest management plan and understand my responsibilities regarding conducting management practices and harvests as called for in this plan.

LEGAL DESCRIPTION AND ACERAGE COVERED:

This 80 acre parcel of land, T47N, R42W, E ½ of SW ¼, Section 14, is located in Gogebic County MI.

OBJECTIVES AND INTENTIONS OF USE:

The owner's main objectives are to maintain a healthy sustainable forest through active management, show the costs and benefits of timber management from a financial perspective, with a special consideration to public educational opportunities.

PROPERTY OVERVIEW

This particular 80 acre parcel contains one stand type, which is composed of northern hardwoods, the species present are primarily white ash, black ash, basswood, hard maple, red maple and scattered hemlock. The terrain is rolling and does not have any major hills that would be of any issue for harvesting operations. As for line work, the north and east lines are painted in and easily seen. There are three monumented corners on this parcel located in the north east, south east, and south west corners of the property. These corners are in good condition and caution should be taken to avoid damaging them.

EDUCATIONAL OPPOTUNITIES

This property offers a few different educational opportunities that could be highlighted for the public to learn from. The first would be road signage. The location of this property is within close proximity to Lake Shore Drive which is heavily used by tourists and residents of Lake Gogebic alike. A sign could be placed on the road pointing back to this 80 acre parcel explaining the land ownership as well as the properties sustainability practices. Once within the 80 acre parcel a more detailed sign explaining the forest management practices occurring on the property and how both the land, and landowners are benefiting from the sustainable timber management practices.

There could also be an educational opportunity and continual pest monitoring system in place. This could be done by having signage explaining what forest pests and diseases can affect the northern hardwood stand present on this parcel, such as Emerald Ash Bore (EAB). The posted signage could inform the public on what trees may be affected and how to identify them, and what the damage from the pests/ diseases may look like. An example would be bore holes from EAB. If the general public reading and following this monitoring system thinks they have found evidence from such pests there could be a posted phone number for them to call and report their findings.

SOIL INFORMATION:

The soils on this property are primarily sandy loams and silt loams with varying amounts of gravel or cobble, however there are some special considerations before harvesting operations can begin. It is suggested that winter should be the time of year harvesting takes place since there are lower spots in the north east corner, as well as the southern part of the property. These areas appear to be wet seasonally and the added precautions will prevent damage from rutting.

Attached on the back is a soils map and further explanation of each soil type.

PARCEL MAP

GOGEBIC COUNTY

T 47 N, R 42 W

Section 14

E ½ of SW ¼

80 Acres



CURRENT STOCKING AND CONDITIONS

Stand 1, Northern Hardwoods 80 acres, M9, currently averaging 145 square feet of basal area. This stand is well stocked with healthy tree species occupying it. Previous thinnings have left a well-spaced, high stem quality stand, which will produce excellent timber in the next thinning and continue to do so into the future. One concern for this property however is the high white and black ash component, with the major threat in the form of Emerald Ash Bore (EAB). As of now there is no sign of the pest and the stand's ash component is healthy. However, with a campground just down the road and this area having a high amount of human activity, it places this stand at a high risk for an EAB infestation.

MANAGEMENT

This hardwood stand, which makes up the entire 80 acre property, is going to be managed primarily for high value, high quality sugar maple and other northern hardwood species that will produce maximum revenue for the landowner. It has been proven in multiple studies that the best way to manage northern hardwood stands is single-tree and/or group selection systems, thinning the overall basal area to achieve the highest productivity over time. This management results in the classic "Reverse J" curve that optimizes growth over time. By using a reverse J curve, we allow for many smaller trees in the understory that will replace the trees we harvest during each entry. These thinnings will leave us with high value stems that are growing as fast as the site conditions will allow. Using these harvest methods to promote the highest volume growth, we will also maximize revenue over time.

Species of lower representation within this stand should also be taken into consideration while marking for harvest treatments. Species such as hemlock, white pine, red oak, yellow birch, and white birch should be encouraged wherever possible within this parcel to add diversity and promote wildlife habitat. Sustainability is key, and by retaining and managing for a more diverse species complex the system will be healthier and better off into the future.

SUMMARY TABLE

Stand	Type	Acres	Practice	Year	Notes
1	Northern Hardwoods M9	80	Selection Thinning	2016	Thinning in another 12 years will be necessary

TIMBER INVENTORY

As seen below in the first chart is the estimated timber basis for the property as well as the value of the standing timber. The second chart displays the prices used to determine the value of each species and product. Values for each species and product were determined by using the Crystal Falls Michigan DNR stumpage reports for 2014-2015, as well as the Gogebic Co. Forestry and Parks Commission timber sale bid statements from October 2015.

The Gogebic Co. Forestry and Parks Commission timber sale bid statements from October 2015 were used to estimate the value of sugar maple logs as well as hardwood pulp. These values were better fit for this property than the DNR's averages for these two products. The DNR reports were a yearly average giving sound and recent data for the rest of the products and species. The only foreseeable issue with these numbers is that the DNR's stumpage prices tend to be slightly inflated for various reasons. However, this is still a perfectly acceptable resource to use in this case to provide accurate data for all tree species, as well as products, that were taken into account for this parcel's timber evaluation.

The total saw timber value on this parcel (as seen below in the first chart) is \$114,001, with a total hardwood pulp value of \$109,198, combined making the total estimated value of timber on this parcel \$223,200.

Species	Red Maple	Sugar Maple	Yellow Birch	White Ash	Black Ash	Northern Red Oak	Basswood	Tract Totals mbf
Tract Total mbf Per Species	27.75	85.11	1.24	170.85	33.75	3.11	133.94	455.75
Tract Total mbf Value Per Species	\$ 6,466.19	\$ 32,342.95	\$ 591.57	\$ 39,295.46	\$ 4,556.47	\$ 746.29	\$ 30,002.75	\$ 114,001.69
Hard Wood Pulp								Tract Totals Cords
Average Cords Per Acre								31.84
Total Pulp Cords on Tract								2,547
Total Tract Pulp Cord Value								\$ 109,198.46
Total Tract Value mbf Plus Hardwood Pulp Cords								\$ 223,200.15

Saw Timber mbf Prices Used		Pulp Cord Price Used	
Species	Per mbf Price	Species	Per Cord Price
Red Maple	\$ 233	Mixed Hardwood Pulp	\$ 42.87
Sugar Maple	\$ 380		
Yellow Birch	\$ 478		
White Ash	\$ 230		
Black Ash	\$ 135		
Norther Red Oak	\$ 240		
Basswood	\$ 224		

FUTURE PROVISIONS TO KEEP RECORDS OF AND WATCH FOR

This plan will be thorough enough to last another 20 years, at which point State of Michigan regulations require another forest management plan to be written. However, during this 20 year time frame another thinning is scheduled, (12 years from the thinning that needs to happen ASAP) this thinning is to be recorded, and a short overview needs to be written up explaining the treatment, and outcome.

While there were no signs of pests or diseases present in this parcel as of now, it is important to remember that healthy forests are not completely absent of pests and diseases, and they are an important part of a balanced ecosystem. As for threats to keep a look out for, it is recommend that tabs are kept on the spread EAB. As previously mentioned with the high amount of human activity surrounding Lake Gogebic, and the close proximity this parcel of land has to the campground, it creates a higher level of risk. If EAB or any other pests, diseases, or unexpected events are found within this parcel in between treatments they are to be noted, and if necessary the proper precautions should be taken.

CONCLUSION

Landlooker Forestry Services sincerely hopes this analysis of your tract will provide you with a better understanding of the dynamics within this 80 acre parcel, and how to manage the tract to provide sustainability and revenue for many years to come. Any questions or concerns can be brought to the attention of Landlooker Forestry Services at any time. We appreciate input on our management practices, and would be happy to provide any additional information requested.

Thank you for choosing Landlooker Forestry Services for your land management needs!

