

Compartment Review Presentation

Escanaba Forest Management Unit

Compartment: 41
Entry Year: 2015
Acreage: 1,156

County: Menominee

Management Area: Green Bay Lake Plain

Revision Date: 06/12/2013

Stand Examiner: Dustin Salter

Legal Description:

T36N R25W Sections 10 and 15

Identified Planning Goals:

This compartment is comprised primarily of three different cover types. They are natural red pine, poor quality red maple, and black spruce. The majority of the pine is nearly ninety years old and is mature. These stands are ready to be regenerated, seven of these stands are prescribed for treatment. These stands will be seed tree cut, than will be followed up with mechanical scarification to expose bare mineral soil to facilitate red pine regeneration. One of the other primary cover types is poor quality red maple. This cover type is mixed with ash, balsam fir, spruce, aspen, and pine. Six of these stands are prescribed for a clearcut. The maple will be regenerated via stump sprouts. These stands will regenerate to a mix of maple, ash, aspen, spruce/fir, and pine. The last primary cover type is black spruce. There are two of these stands prescribed for a seed tree cut. These stands will be managed for black spruce, but a mix of red and white pine will also regenerate. Three lowland deciduous stands will also be clearcut. These stands will be managed for a mix of maple, ash, and mixed conifer.

Soil and topography:

This primary soil series in this compartment are Deford Mucky Fine Sand, Tawas-Deford Complex, and Deford-Wainola-Rousseau Complex. This stand is a mix of poorly drained black muck over fine sand and well drained sand. The topography is level with some gently rolling terrain.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

This compartment is part of a large block of state land that is about 25 miles long and 7 miles wide along the Lake Michigan shoreline. Small private land holdings are scattered within this block. Land use is mixed on state forest land and largely recreational on private in-holdings. Most of the land adjacent to compartment 41 is state owned. Private land is located in the W ½ NW ¼ of Section 10.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

None present.

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine (lake) sand and gravel. The glacial drift thickness varies between 10 and 50 feet. The Ordovician Trenton Formation underlies the glacial drift and is quarried for stone west of Escanaba. This area has not been leased previously. A gravel pit is located in the SE corner of Section 12 (#421) and there could be some potential on the uplands. No economic oil and gas production has been found in the UP.

Vehicle Access:

County Road 551 follows the west edge of the compartment, and Co. Rd. 551 and the North Fox Road is on the south edge of the compartment. Most stands are accessible via existing roads and trails, however, many stands can only be accessed during winter months due to wet soils.

Survey Needs:

A few registered corners will need to be set in order to prepare prescribed timber.

Recreational Facilities and Opportunities:

The Forest Islands ORV trail traverses the west half of Section 10. Loop #3 of the Cedar River Pathway traverses Section 15 and the very southern portion of Section 10. This compartment is used primarily for recreation and hunting.

Fire Protection:

There is limited access for fire equipment into the compartment. Much of the compartment has lowland soils or hardwood timber type that is not prone to fire. But there are a number of large red pine and white pine stands also present. The majority of these stands are over 80 years of age, so they are very fire sturdy. So th emajority of them would only support surface fires. A number of these mature pine stands are scheduled for harvest this entry period, so there will be heavy fuel loads for a few years following harvest. There are no adequate water resources within the compartment, but the Big Cedar River is within a quarter of a mile from the ewest edge of the compartment.

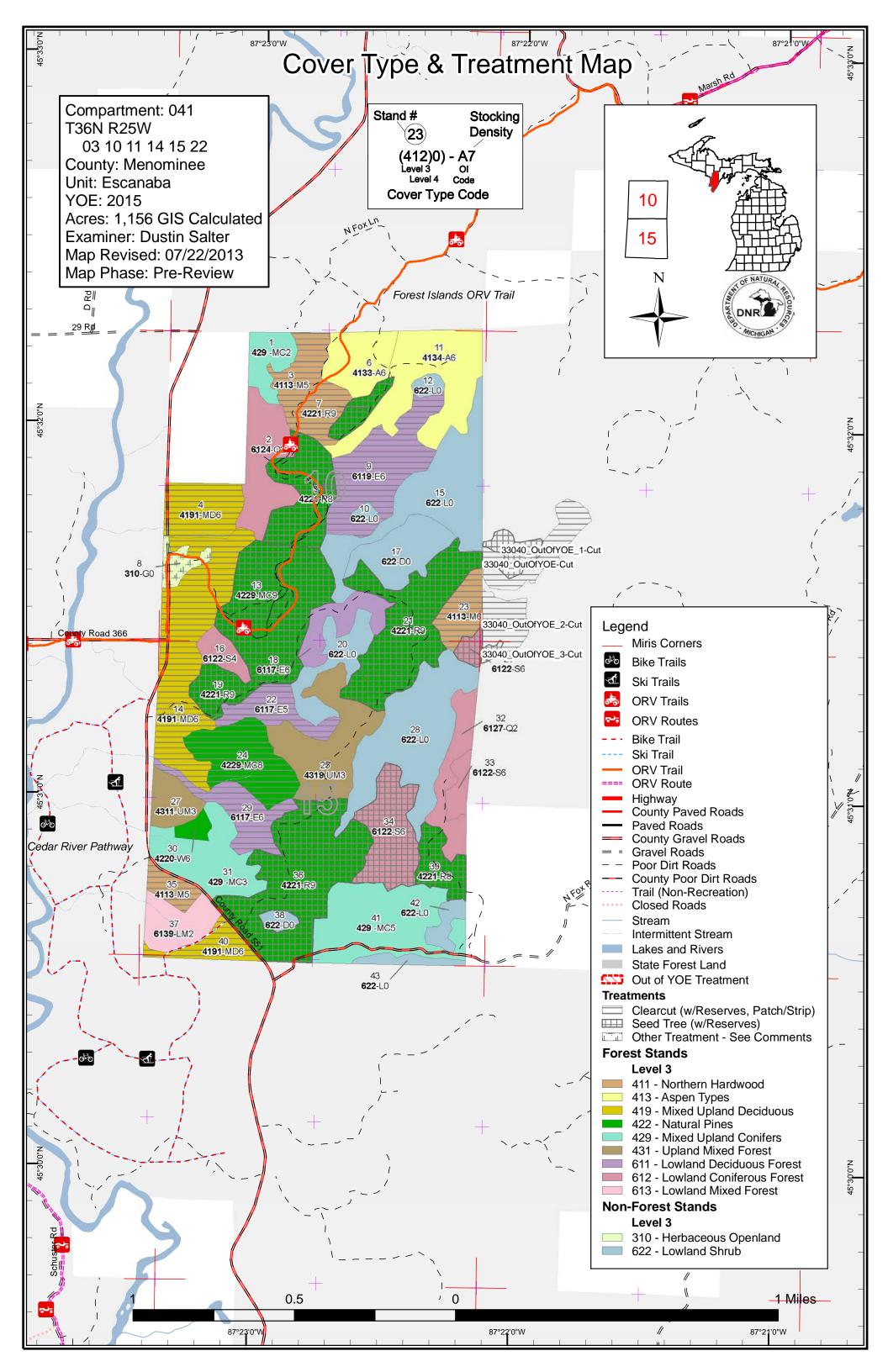
Additional Compartment Information:

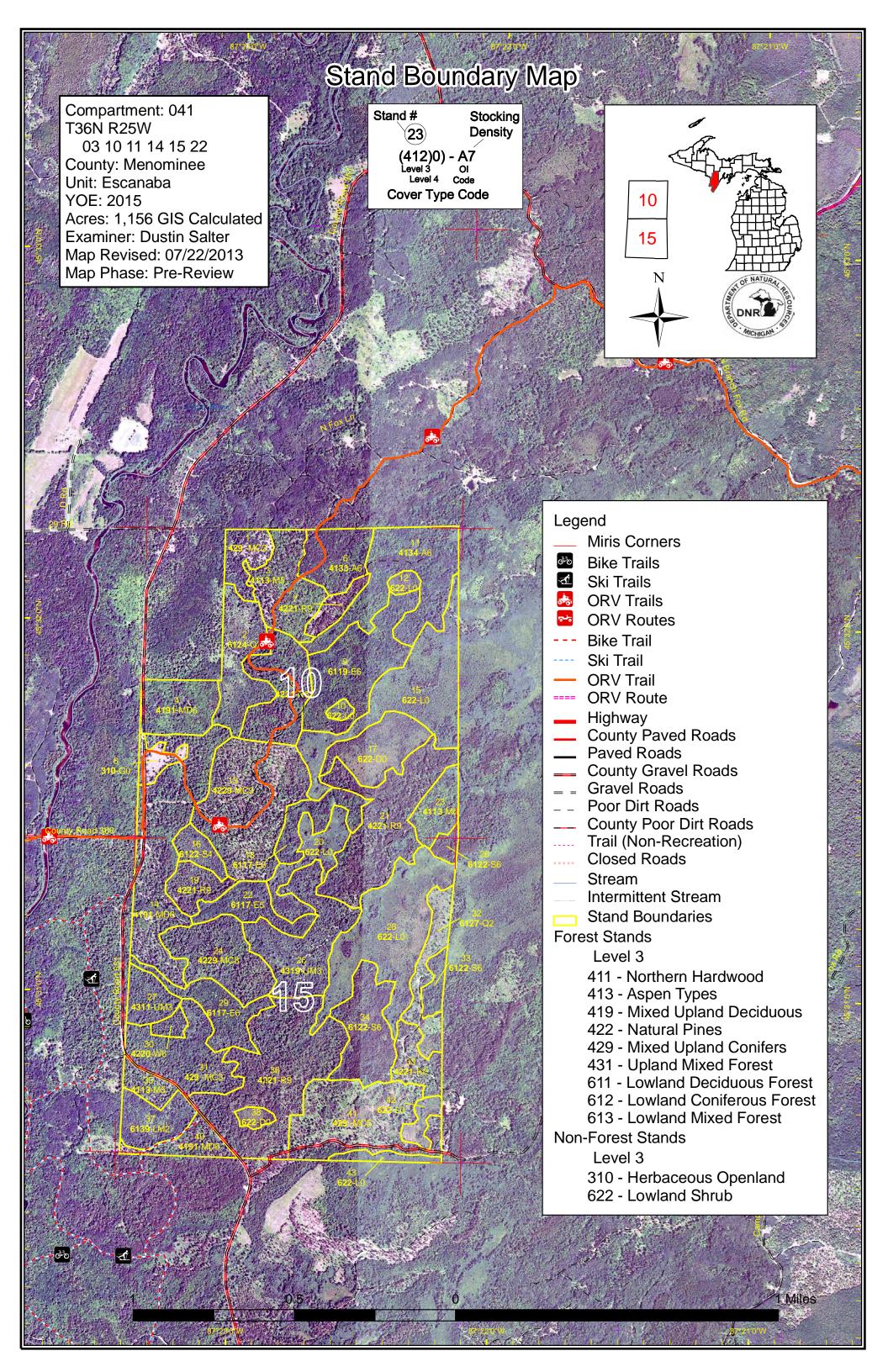
The following reports from the Inventory are attached:

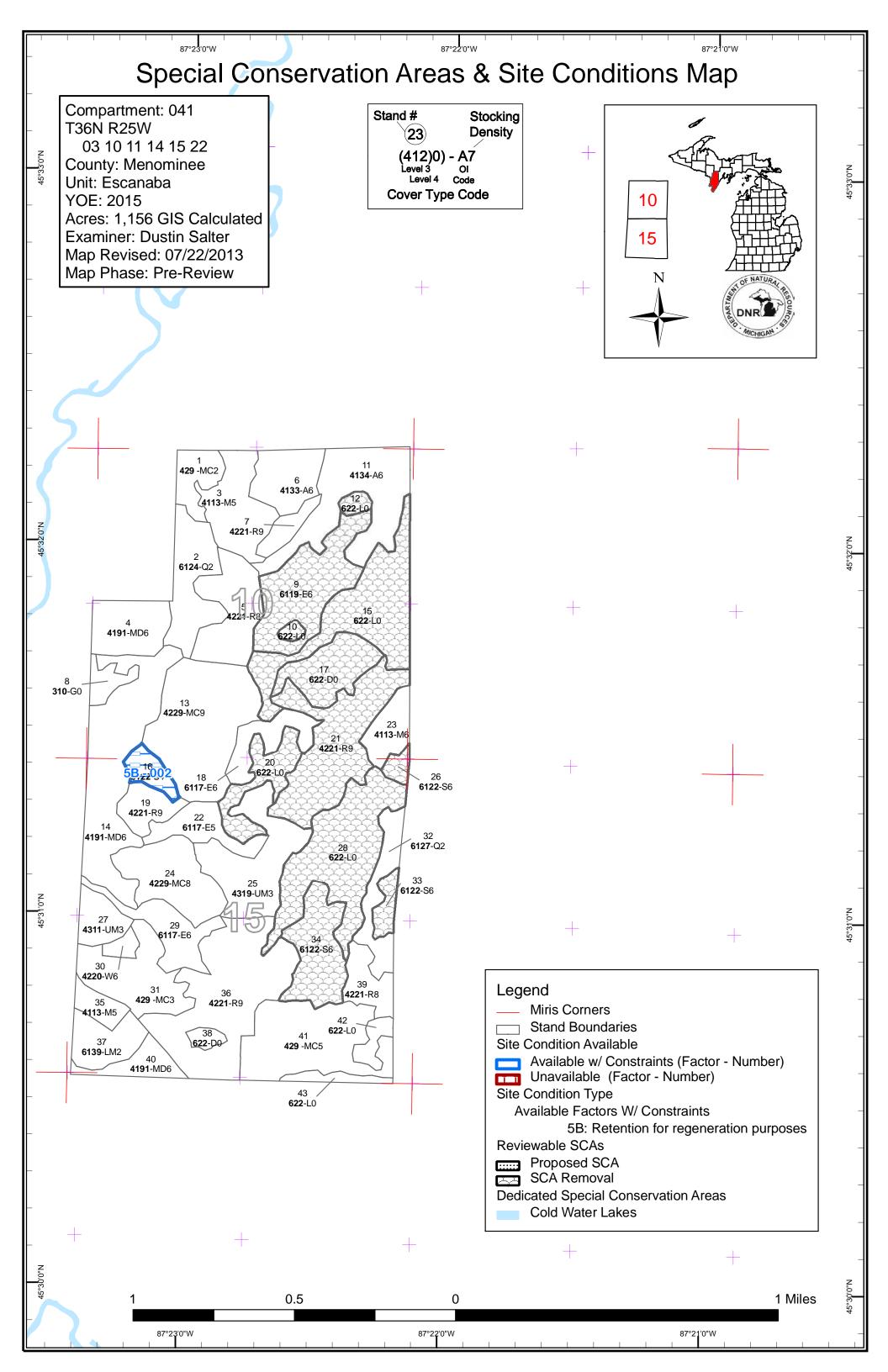
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

The following information is displayed, where pertinent, on the attached compartment maps:

Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system







Dustin Salter: Examiner

Compartment: 041 Year of Entry: 2015



Age Class

						Age (J.400									
		8.9	70.7g	Porto	\$\disp\{\din\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\din\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\disp\{\din\{\din\{\din\{\disp\{\din\{\\\\\\\\\\	AD AS	\$5.05 \$5.05	80.00	, o,	80° 80° 80° 80° 80° 80° 80° 80° 80° 80°	85.00	Sa. io	70,70	70 [×] 30°	100 A	, pro
Aspen	0	0	0	53	23	0	0	0	0	0	0	0	0	0	76	
Herbaceous Openland	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Lowland Conifers	0	52	0	0	0	0	0	0	0	0	0	0	0	0	52	
Lowland Deciduous	0	0	0	0	0	0	0	65	41	0	0	0	0	0	105	
Lowland Mixed Forest	0	0	19	0	0	0	0	0	0	0	0	0	0	0	19	
Lowland Shrub	163	0	0	0	0	0	0	0	0	0	0	0	0	0	163	
Lowland Spruce/Fir	0	0	0	0	7	0	0	0	46	0	0	0	0	0	53	
Mixed Upland Deciduous	0	0	0	0	0	0	0	25	83	0	0	0	0	0	108	
Natural Mixed Pines	0	0	0	0	0	0	0	0	105	0	0	0	0	0	105	
Northern Hardwood	0	0	0	0	0	0	0	15	40	0	0	0	0	0	55	
Red Pine	0	0	0	0	0	0	0	0	195	15	0	0	0	0	210	
Treed Bog	31	0	0	0	0	0	0	0	0	0	0	0	0	0	31	
Upland Conifers	0	0	36	14	0	0	0	0	57	0	0	0	0	0	108	
Upland Mixed Forest	0	0	57	0	0	0	0	0	0	0	0	0	0	0	57	1
White Pine	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	1
Total	202	52	113	67	30	0	0	109	567	15	0	0	0	0	1156	l



Report 2 – Proposed Treatment Summaries

Escanaba Mgt. Unit

Compartment: 041 Year of Entry: 2015 **Total Compartment Acres: 1,156**

Acres by Treatment Type

Commercial Harvest - 603 Tree Planting - 0 Other - 0

Habitat Cut - 0

Opening Maintenance - 8

	Cover Type by Harvest Method								
		/	15 0.	in o	Lie S	Sierno O	OK OK		Se de la constant de
Lowland Coniferous Forest		0	0	37	0	0	0	37	
Lowland Deciduous Forest		88	0	0	0	0	0	88	
Mixed Upland Deciduous		108	0	0	0	0	0	108	
Natural Pines	36	0	279	0	0	0	315		
Northern Hardwood	<u>'</u>	55	0	0	0	0	0	55	
	Total	287	0	316	0	0	0	603	

CoverType

Report 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 041 Year of Entry2015 Approval

Name 33040_OutOfY

Treatment

Size Density

BA Age Range **Treatment** Type

Treatment Method

Cover Type Objective

Status

OE 1-Cut

18 4

Acres

Harvest

Clearcut with Reserves

6119 - Mixed **Lowland Deciduous** Forest

Cmpt. Review Proposal

Specs:

s t а

n

Prescription Clearcut with Reserves - Cut all trees greater than 4 inches; except leave all cedar and pine. The retention will be the cedar, pine, and advanced

conifer regeneration. Manage this stand for a mix of maple, ash, aspen, and balsam fir, and spruce.

Other

Stand 9 in comp 40. Lowland deciduous stand that contains primarily red maple, ash, birch, and aspen. Treat this stand with the adjacent

Comments: stands in comp 41.

<u>Next</u>

Regeneration Survey per work instructions.

Steps:

Proposed

10/01/2014 Start Date:

> 33040 OutOfY OE_2-Cut

Harvest

Clearcut with Reserves

4319 - Mixed Upland Forest Cmpt. Review Proposal

Specs:

Prescription Clearcut with Reserves - Cut all merchantable stems; except leave all cedar, hemlock, and enough white pine to have 10% retention. This stand will be managed for spruce, red pine, and white pine primarily, but any combination of the current overstory speices will be acceptable.

Other

Stands 7 and 8 in comp 40. This stand is almost two-aged there is a dense overstory of pine, spruce, maple, and birch primarily, with a thick

understory of the same mix. The purpose of this harvest is to remove the overstory to release the advanced regeneration. Treat this stand with the adjacent stands in comp 41.

Comments:

Regeneration Survey per work instructions.

<u>Next</u> Steps:

Proposed

10/01/2014 Start Date:

> 33040 OutOfY 1.6 OE 3-Cut

Harvest

Seed Tree with

42210 - Natural Red Cmpt. Review

Reserves Pine Proposal

Specs:

Prescription Seed Tree with Reserves - Cut all trees greater than 4 inches; except mark some scattered red pine seed trees to retain. The red pine seed

trees will be the retention. Leave less than 10 basal are of seed trees. This stand is being managed for red pine.

Other

Stand 5 in comp 40. High quality red pine stand, that should be managed for red pine. Ttreat this stand while the adjacent stands in comp 41

Comments: are being treated.

<u>Next</u>

If access is possible, scarify following the harvest to expose mineral soil. Regeneration Survey per work instructions.

Steps:

Proposed

10/01/2014 Start Date:

> 33040_OutOfY 90 **OE-Cut**

Harvest

Seed Tree with Reserves

42210 - Natural Red Cmpt. Review

Proposal

Specs:

Prescription Seed Tree with Reserves - Cut all trees greater than 3 inches; except mark some pine and spruce seed trees to retain for seed and retention. More red pine seed trees should be left than white pine or spruce, but overall leave less than 10 basal area of seed trees. Manage this stand for

red pine.

Other Stand 11 of comp 40. Red pine stand with some lower areas that contain white pine and spruce. Treat this stand while harvesting the adjacent stands in comp 41.

Comments: Following harvest, scarify this stand to expose mineral soil. Regeneration Survey per work instructions. Next

Steps:

Proposed

Report 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 041 Year of Entry2015

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a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	33041003-Cut	31.5	4113 - R.Maple, Conifer	Medium Density Pole	83	51-80	Harvest	Clearcut with Reserves	4113 - R.Maple, Conifer	Cmpt. Review Proposal

Specs:

S

Prescription Clearcut with Reserves - cut all trees greater than 3 inches; except mark enough pine to retain to provide an adequate seed source and 3% retention. In addition; leave all cedar and hemlock if present. The pine will be left scattered or in small clumps, but overall less than 10 basal area. This stand will be managed for red maple, aspen, and pine primarily.

Other_ Comments:

Stand was cut on contract 031-05-01 in 2009. The aspen, spruce, balsam fir, and birch were cut out from the stand. The residual overstory is too dense to allow enough sunlight in to regenerate the stand. There are some aspen sprouts in the more open areas.

<u>Next</u>

Regeneration Survey per work instructions.

Steps:

Proposed

Start Date: 10/01/2014

25.1 4191 - Mixed 141-170 Harvest Clearcut with 4113 - R.Maple, Cmpt. Review 33041004-Cut High **Upland Deciduous** Density Reserves Conifer Proposal with Conifer Pole

Specs:

Prescription Clearcut with Reserves - cut all species greater than 3 inches; except retain the white pine, red pine, hemlock, and cedar. Retaining all of these species will equal about 10% retention. This stand will be managed for primarily red maple and spruce/fir. The red maple will regenerate via stump sprouts primarily.

Other

The center of this stand was thinned on contract 032-05-01 in 2008. There is no regeneration showing. Overall this stand is a poor quality red Comments: maple type. There is not enough qualty stems within it to thin the stand. There is some cedar, white pine, and red pine within the stand, but

none of them constitute 2%. But overall there is about 3%.

Regeneration Survey per work instructions.

<u>Next</u> Steps:

<u>Proposed</u>

10/01/2014 Start Date:

5 33041005-Cut 33.5 42210 - Natural Red Medium 87 51-80 Harvest Seed Tree with 42211 - Natural Red Cmpt. Review Pine. Mixed Pine Density Log Proposal Reserves Deciduous

Specs:

Prescription Seed Tree with Reserves - Cut all pine greater than 5 inches, except mark some scattered red pine white pine for seed trees and retention. Cut all other species greater than 4 inches, except leave all hemlock and cedar if present. The retention will be the seed trees and advanced regeneration. Red pine is the desired species, but a mix with the other current species is acceptable.

<u>Other</u> Comments:

Stand was last cut on contract 033-90-01 in 1993. All trees were cut; except pine, hemlock, and cedar and some other scattered seed trees. Some pine and hemlock was marked to cut. The areas of the stand that didn't have much overstory left, regenerated very well to a mix of red pine, white pine, spruce, balsam fir, and red maple. The overstory needs to be removed to release the regeneration around it. Where the stand was opened up there is a higher percentage of red pine seedlings, which is the desired regen. The residual overstory is very patchy. Some areas of the stand there are no stems and in other parts there is over 100 basal area.

Next

In the areas of the stand that currently have a dense overstory and very little regeneration scarify after harvest to expose mineral soil to regenerate red pine. Regeneration Survey per work instructions.

Steps: **Proposed**

10/01/2014 Start Date:

33041007-Cut 8.4 42210 - Natural Red High 87 81-110 Harvest Seed Tree with 42210 - Natural Red Cmpt. Review Pine Density Log Reserves Proposal

Prescription Seed Tree with Reserves - Cut all species greater than 2 inches; except mark some scattered red pine seed trees to retain. In addition, leave all

Specs: hemlock and cedar if present. Less than 10 basal area will be left. The seed trees will be the retention. Manage this stand for red pine.

Stand was last thinned on contract 031-05-01 in 2009. Pine was thinned and all aspen, maple, spruce, balsam fir, and birch were cut out. This Other Comments: stand needs to be harvested now, before there is too much advanced regeneneration and we will not be able to regenerate red pine.

Next

Following harvest scarify this stand to expose mineral soil. Regeneration Survey per work instructions.

Steps:

Proposed

Compartment: 041 Escanaba Mgt. Unit Report 3 -- Treatments Prescribed Year of Entry2015 with No Limiting Factor s t а **Treatment** Size BA **Treatment Treatment Cover Type** Acres CoverType Approval n Method d Name Density Age Range Type Objective Status 6119 - Mixed 47 4 High 81-110 Clearcut with 6119 - Mixed Cmpt. Review 9 33041009-Cut 79 Harvest **Lowland Deciduous** Density Reserves **Lowland Deciduous** Proposal Forest Pole Forest Prescription Clearcut with Reserves - Cut all trees greater than 4 inches; except designate some dense pockets/areas of cedar to retain. Also mark some spruce seed trees, where they are present. The stand will regenerate to a mix of ash, maple, and spruce/balsam fir. Retention will be the Specs: pockets of cedar, spruce seed trees, and advanced spruce/fir regeneration. Other_ Lowland deciduous stand, with some more upland areas with red maple. Comments: Regeneration Survey per work instructions. <u>Next</u> Steps: **Proposed** Start Date: 10/01/2014 69.1 42290 - Natural 51-80 Harvest 42210 - Natural Red Cmpt. Review 13 33041013-Cut High 87 Seed Tree with Mixed Pine Density Log Reserves Pine Proposal Prescription Seed Tree with Reserves - Cut all trees greater than 3 inches; except mark some pine seed trees to retain for seed and retention. More red pine seed trees should be left than white pine, but overall leave less than 10 basal area of seed trees. Manage this stand for red pine. Specs: Other Stand was thinned in 1993 and than again in 2008 on contract 032-05-01. The stand still has a dense overstory in most areas of the stand, which will enable shade tolerant species to seed in, but will discriminate against red pine. This stand is a very high quality red pine site and should be Comments: managed for it. Please consider adding trail consideration language such as: Keep trail unobstructed and clear of tops, limbs and woody debris, Avoid decking on the trail, Avoid skidding on the trail where possible and minimize skid crossings, insure that the trail remains in "as good" condition during and after the logging is complete, Other language that has been used in the past would work too. Following harvest scarify this site to expose mineral soil. Regeneration Survey per work instructions. <u>Next</u> Steps: Proposed Start Date: 10/01/2014 33041014-Cut 70.0 4191 - Mixed 51-80 Harvest Clearcut with 4191 - Mixed Cmpt. Review High 87 Upland Deciduous Density Reserves Upland Deciduous Proposal with Conifer Pole with Conifer to retain. In addition, retain all sub-merchantable black ash. These trees will be the retention. This stand will be managed for a mix of red maple, aspen, spruce/fir, and pine. Any mix is acceptable. This stand was cut on contract 032-05-01 in 2007-08. The western 1/3 rd of the stand had the aspen, spruce, balsam fir, and birch cut and the Other western 2/3 rds had the aspen and birch and maple over 9 inches cut. Overall this stand has too dense of an overstory to regenerate.

Prescription Clearcut with Reserves - cut all trees greater than 3 inches; except retain all hemlock, cedar, and mark some red pine and white pine seed trees Specs:

Comments:

Regeneration Survey per work instructions. Next

Steps:

<u>Proposed</u>

Start Date: 10/01/2014

33041019-Cut High 42210 - Natural Red Cmpt. Review 19 13.4 42210 - Natural Red 87 141-170 Harvest Seed Tree with Pine Density Log Reserves Pine Proposal

Prescription Seed Tree with Reserves - Cut all trees greater than 4 inches; except mark some pine seed trees to retain for seed and retention. More red pine seed trees should be left than white pine, but overall leave less than 10 basal area of seed trees. In addition, leave all hemlock and cedar if Specs:

present. Manage this stand for red pine.

Other This stand was last cut 22 years ago, which opened the stand up enough to allow areas of the stand to regenerate to a mix of upland conifer

Comments: species, heavy to pine. There are some low pockets within the stand.

<u>Next</u> Following harvest scarify this site to expose mineral soil. Regeneration Survey per work instructions.

Steps:

Proposed

Report 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 041 Year of Entry2015

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a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
21	33041021-Cut	60.5	42210 - Natural Red Pine	High Density Log	87	81-110	Harvest	Seed Tree with	42210 - Natural Red Pine	Cmpt. Review

Specs:

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Prescription Seed Tree with Reserves - Cut all trees greater than 3 inches; except mark some pine seed trees to retain for seed and retention. More red pine seed trees should be left than white pine, but overall leave less than 10 basal area of seed trees. Leave a number of seed trees along the pathway to provide for signage and aesthetics. Manage this stand for red pine.

Other Comments:

Remove the Old Growth/SCA Designation from this stand, this is not a unique stand or does it provide unique characteristics. Stand was last thinned in 1993. The Cedar River Pathway traverse through this stand. The stand still has a dense overstory in most areas of the stand, which has enabled some shade tolerant species to seed in, but will discriminate against red pine. This stand is a very high quality red pine site and should be managed for it. Please consider adding trail consideration language such as: Keep trail unobstructed and clear of tops, limbs and woody debris. Avoid decking on the trail, Avoid skidding on the trail where possible and minimize skid crossings, insure that the trail remains in as good" condition during and after the logging is complete, Other language that has been used in the past would work too.

Next Steps: Following harvest, scarify this site to expose mineral soil. Avoid the thick patches of advanced regeneration when scarifying. Regeneration Survey per work instructions.

Proposed

22

10/01/2014 Start Date:

33041022-Cut

18.0

6117 - Lowland Deciduous, Mixed Coniferous

Medium Density Pole

87

Harvest

Clearcut with Reserves

6117 - Lowland Deciduous, Mixed Coniferous

Cmpt. Review Proposal

Prescription Clearcut with Reserves - Cut all species greater than 4 inches; except mark to retain some spruce, tamarack, cedar, and white pine seed trees. These seed trees will make up the retention. Manage this stand for a mix of red maple, ash, spruce, and tamarack. Specs:

Other Comments:

Poor quality lowland decduous stand, that averages about 60 basal area. Stand is mostly a mix of red maple and ash. This stand should be harvested now while we are harvesting the adjacent stands and to salvage the ash prior to the arrival of EAB. By cutting this stand it will push it

towards more maple, spruce, and tamarack. Regeneration Survey per worl instructions.

<u>Next</u> Steps:

Proposed

Start Date: 10/01/2014

23 33041023-Cut 15.1 4113 - R.Maple. Hiah 73 51-80 Harvest Clearcut with 4113 - R.Maple. Cmpt. Review Conifer Density Reserves Conifer Proposal Pole

Specs:

Prescription Clearcut with Reserves - Cut all hardwood and aspen greater than 4 inches and all conifers greater than 5 inches. Also mark some scattered pine seed trees to retain in areas where there is not much advanced regeneration. The pine seed trees along with the advanced regeneration will make up the retention. Manage this stand for a mix of upland conifers and red maple.

<u>Other</u> Comments:

Poor quality red maple stand with a dense understory of spruce, pine, and balsam fir. The advanced regen needs to be released before it becomes stunted and gets too tall to operate in without destroying the regen. Part of this stand continues into comp 40, cut this portion of the stand at the same time.

Next

Regeneration Survey per work instructions.

Steps:

<u>Proposed</u>

Start Date: 10/01/2014

33041024-Cut 35.7 42290 - Natural Medium 87 1-50 Harvest Clearcut with 42290 - Natural Cmpt. Review Density Log Mixed Pine Reserves Mixed Pine Proposal

Specs:

Prescription Clearcut with Reserves - Cut all conifers that are greater than 6 inches and cut all maple and ash greater than 5 inches. Except, retain all hemlock, cedar, and mark some pine seed trees to retain where the advanced regen is not very dense. The hemlock, cedar, pine seed trees, and the advanced regen will be the retention. This stand will be managed for a mix of upland conifers and maple. There are a couple of areas within this stand where there is very little overstory. These areas can be excluded from the sale. These areas are in the northeast and southeast portions of the stand.

<u>Other</u> Comments:

This stand was last cut in 1993 on contract 014-91-01. The pine was marked to cut and all other species over 7 inches was cut; except hemlock and cedar. This is a two-aged stand; the overstory is primarily a mix of mature white and red pine and the understory is a mix of upland conifers. The advanced regen is very dense throughout most of the stand, except where there the overstory is dense. The overstory needs to be removed

to release the advanced regen.

<u>Next</u> Steps: Regeneration Survey per work instructions.

Proposed

Start Date: 10/01/2014

Compartment: 041 Escanaba Mgt. Unit Report 3 -- Treatments Prescribed Year of Entry2015 with No Limiting Factor s t а **Treatment** Size BA **Treatment Treatment Cover Type** Acres CoverType Approval n Method d Name Density Age Range Type Objective Status 4.3 High 87 Seed Tree with 6122 - Black Spruce Cmpt. Review 26 33041026-Cut 6122 - Black Spruce Harvest Density Reserves Proposal Pole Prescription Seed Tree with Reserves - cut all species greater than 3 inches; except mark to retain a couple of seed tree clumps. The seed tree clumps Specs: should consist of black spruce, red pine, tamarack, and white pine. Manage this stand for black spruce and red pine, but a mix with the other conifer species is acceptable. Other Nice quality black spruce stand with areas of good quality red pine. A portion of this stand continues into comp 40, treat that portion as well with Comments: Regeneration Survey per work instructions. <u>Next</u> Steps: **Proposed** Start Date: 10/01/2014 6117 - Lowland 22.5 Harvest Clearcut with 6117 - Lowland Cmpt. Review 29 33041029-Cut High 87 Deciduous, Mixed Density Reserves Deciduous, Mixed Proposal Coniferous Pole Coniferous Prescription Clearcut with Reserves - Cut all species greater than 4 inches; except hemlock, cedar, and also leave some pine, spruce, and tamarack seed trees. This stand will be managed for a mix of the current species composition, any mix is acceptable. Specs: Overall poor quality lowland hardwood stand with thick conifer understory. The stand is low overall. Salvage the ash before EAB moves in and Other Comments: we ahve the opportunity to increase the conifer component of this stand by releasing the advanced conifer regen. **Next** Regeneration Survey per work instructions. Steps: **Proposed** 10/01/2014 Start Date: 80 Seed Tree with 33041034-Cut 33.0 6122 - Black Spruce High Harvest 6122 - Black Spruce Cmpt. Review Reserves Density Proposal Pole

34

Prescription Seed Tree with Reserves - Cut all species greater than 3 inches; except leave some scattered seed tree clumps along with two retention areas. One retention area will be left on the west side and one on the east side. These areas have younger stems within them and should hold another Specs: 10 to 20 years. Manage this stand for black spruce and red pine.

Other This stand will be removed from SCA/old growth status - this stand does not provide any unique characteristics or features that need to be Comments: preserved. This stand is a mix of black spruce and red pine and also a mix of upland and lowland. The spruce has become stunted over the last 20 years.

<u>Next</u> Regeneration Survey per work instructions.

Steps:

Proposed Start Date:

10/01/2014

35 33041035-Cut 8.8 4113 - R.Maple, Medium 51-80 Harvest Clearcut with 6130 - Fir, Aspen, Cmpt. Review Conifer Density Reserves Maple Proposal Pole

Prescription Clearcut with Reserves - Cut all species greater than 3 inches; except leave all beech, cedar, and hemlock and mark to leave some pine seed Specs: trees. This stand will be managed for aspen, maple, and a mix of upland conifers, any mix is acceptable.

Other This stand was cut in 2007 on contract 032-05-01. All aspen, birch, balsam fir, and spruce was cut along with all maple greater than 12 inches. Comments: The residual maple is poor quality and the tops are dying back after being opened up. The overstory is currently too dense to allow enough

sunlight to have the other species regenerate. So by removing the overstory now, the aspen, balm, balsam. spruce, and white pine will regenerate better and the maple will stump sprout.

Regeneration survey per work instructions. <u>Next</u>

Steps:

Proposed

Report 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 041 Year of Entry2015

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
36	33041036-Cut	79.4	42210 - Natural Red Pine	High Density Log	89	81-110	Harvest	Seed Tree with Reserves	42210 - Natural Red Pine	Cmpt. Review Proposal

Specs:

S

Prescription Seed Tree with Reserves - Cut all trees greater than 4 inches; except leave some scattered red pine and white pine seed trees. No more than 10 basal area should be left and the majority of the seed trees should be red pine. The pockets of advanced regen and the pine seed trees will make up the retention. Red Pine is the desired species.

Other Comments:

Stand was cut in 1993 on contract 014-91-01. All species greater than 6 inches were cut; except cedar, hemlock, and pine. Some pine was marked to cut. The Cedar River Pathway runs through this stand. Overall this stand has mature red pine throughout, but there are pockets where there was little pine left from the last harvest and these areas have fully regenerated to a mix of upland conifer and red maple. This stand needs to be cut now to regenerate the red pine. Overall the stand is upland, but there are some low wet areas mixed in. Please consider adding trail consideration language such as: Keep trail unobstructed and clear of tops, limbs and woody debris, Avoid decking on the trail, Avoid skidding on the trail where possible and minimize skid crossings, insure that the trail remains in "as good" condition during and after the logging

Other language that has been used in the past would work too.

Next Steps: Following harvest, scarify all open areas within the stand to provide bare mineral soil to facilitate red pine regeneration. Regeneration Survey per

work instructions.

Proposed

10/01/2014 Start Date:

51-80 33041039-Cut 14 8 42210 - Natural Red Medium 90 Harvest Seed Tree with 42210 - Natural Red Cmpt. Review 39 Density Log Proposal

Prescription Seed Tree with Reserves - Cut all trees greater than 3 inches; except leave the cedar, hemlock, and scattered red pine seed trees. Leave less than 10 basal area of residual stems. Manage this stand for red pine. Specs:

Other Comments:

Stand was cut in 2001 on contract 040-00-01. All species were cut; except pine, hemlock, and cedar. The pine was thinned. The red pine is mature, it is time to regenerate the stand. In areas where there wasn't much residual pine, the stand is filling in with a mix of species. This is a

high quality red pine site and should be managed for that.

Next Following harvest scarify this site, exposing bare mineral soil to facilitate red pine regeneration. Regeneration Survey per work instructions.

Steps:

Proposed

Start Date: 10/01/2014

40 33041040-Cut 12.9 4191 - Mixed High 87 51-80 Harvest Clearcut with 4191 - Mixed Cmpt. Review Upland Deciduous **Upland Deciduous** Density Reserves Proposal with Conifer Pole with Conifer

Prescription Clearcut with Reserves - Cut all trees greater than 3 inches; except leave all hemlock, cedar, and some scattered pine. Leave enough pine to Specs: meet the retention guidelines. This stand will be managed for red maple, aspen, and a mix of upland conifer. Any combination is acceptable.

Other_ Stand was cut in 2008 on contract 032-05-01. All aspen, spruce, balsam fir, and birch was cut. The stand is a low quality red maple stand with Comments: pockets of pine. In places where there was aspen, the aspen has sprouted but if the overstory isn't removed the aspen regen will become

stunted and die.

<u>Next</u> Regeneration Survey per work instructions.

Steps:

Proposed

10/01/2014 Start Date:

NF 33041008-Other - Specify Cmpt. Review 7.7 3105 - Mixed Non-Forest 310 - Herbaceous 8 Upland Herbaceous Management Openland Proposal NonFor

Prescription Enhance and perpetuate opening. Cut brush and trees, mow, till, plant, and/or fertilize. Burn and/or herbicide if need and funding present. Hard or soft mast plants, shrubs, and trees may be planted if available. Herbaceous plantings will be to provide forage, brood rearing, and recreational Specs:

opportunities.

Other

Comments:

Next

Steps:

Proposed

Unspecified Start Date:

Total Treatment

Acreage Proposed: 653.8

Escanaba Mgt. Unit Report 4 -- Treatments Prescribed with Compartment: 041 a Limiting Factor s Year of Entry2015 t **Treatment** Acres CoverType Size Stand ВА **Treatment Treatment Cover Type Approval** n Method Objective Status Name Density Age Range Type #Type! **Prescription** Specs: Other Comment: <u>Next</u> Steps: <u>Proposed</u> #Type! Start Date:

Total Treatment Acreage Proposed:

Limiting Factor

0

Report 5 – Site Conditions

Escanaba Mgt. Unit

Compartment: 041 Year of Entry: 2015 **Dustin Salter: Examiner**



Availability for Management

Total	Acres	Acres		Domina	nt Site	Conditions
Acres	Available	Not Available		No	5B	
76	76		Aspen	76		
52	52		Lowland Conifers	52		
105	105		Lowland Deciduous	105		
19	19		Lowland Mixed Forest	19		
53	53		Lowland Spruce/Fir	44	9	
108	108		Mixed Upland Deciduous	108		
105	105		Natural Mixed Pines	105		
55	55		Northern Hardwood	55		
210	210		Red Pine	210		
108	108		Upland Conifers	108		
57	57		Upland Mixed Forest	57		
4	4		White Pine	4		
954	954		Total Forested Acres	945	9	
•	100%		Relative Percent		_	•

*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

		Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition		
002	Available	5B: Retention for regeneration purposes	9						
Comments: Stand was cut in 1991 and there were some seed trees left. Overall this stand is a sapling sized stand.									

Compartment: 041 Year of Entry: 2015



Report 6 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Removal 3	Potential Old Growth		SCA Removal	2.4
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	
Removal 1	Potential Old Growth		SCA Removal	3.6
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	
Removal 11	Potential Old Growth		SCA Removal	4.3
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	
Removal 9	Potential Old Growth		SCA Removal	7.0
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	
Removal 7	Potential Old Growth		SCA Removal	21.2
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	
Removal 5	Potential Old Growth		SCA Removal	27.0
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	
Removal 10	Potential Old Growth		SCA Removal	33.0
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	
Removal 2	Potential Old Growth		SCA Removal	47.4
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	
Removal 4	Potential Old Growth		SCA Removal	57.3
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	
Removal 6	Potential Old Growth		SCA Removal	60.5
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	
Removal 8	Potential Old Growth		SCA Removal	66.2
Comments SCA - Removal, this sta	and does not provide any unique features	s or conditions that need to be pr	otected.	

Compartment: 041 Year of Entry 2015



Report 7 - DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment.

Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

Conservation Type Area		Description	HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Lake	stocked trout populations and those of other cold conditions for coldwater fishes may occur in Mich	oxygen conditions that allow naturally-reproduced or water fish species to persist from year to year. Suitable igan lakes if they are relatively deep, have substantial thern) areas of the state. Such lakes are established by es by Fisheries Order 200.
SCA	Cold Water Stream	stocked trout populations and those of other cold to year. Coldwater streams in Michigan typically p	ed oxygen conditions that allow naturally-reproduced or water fish species (e.g., slimy sculpin) to persist from year provide these conditions due to substantial contributions are established by Director's action and designated as

S t	Escanaba Mgt. Unit			Report 8	– Forested	Stands Compartment: 041 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	429 - Mixed Upland Conifers	Medium Density	14.4	30		Stand is a mix of white pine, spruce, and balsam fir; harvest in the future when the spruce and balsam are mature.
2	6124 - Lowland Spruce- Fir	Medium Density	31.9	19		Stand was clearcut on contract 033-90-01 in 1992. All species were cut; except pine, hemlock, and cedar along with some scattered seed trees. The stand is low overall but there are some upland knobs within the stand. Overall the stand is fully stocked, but there are a couple pockets of lowland brush.
3	4113 - R.Maple, Conifer	Medium Density Pole	31.5	83	51-80	Stand was cut on contract 031-05-01 in 2009. The aspen, spruce, balsam fir, and birch were cut out from the stand. The residual overstory is too dense to allow enough sunlight in to regenerate the stand. There are some aspen sprouts in the more open areas.
4	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	25.1	78	141-170	The center of this stand was thinned on contract 032-05-01 in 2008. There is no regeneration showing. Overall this stand is a poor quality red maple type. There is not enough qualty stems within it to thin the stand. There is some cedar, white pine, and red pine within the stand, but none of them constitute 2%, But overall there is about 3%.
5	42210 - Natural Red Pine	Medium Density Log	33.5	87	51-80	Stand was last cut on contract 033-90-01 in 1993. All trees were cut; except pine, hemlock, and cedar and some other scattered seed trees. Some pine and hemlock was marked to cut. The areas of the stand that didn't have much overstory left, regenerated very well to a mix of red pine, white pine, spruce, balsam fir, and red maple. The overstory needs to be removed to release the regeneration around it. Where the stand was opened up there is a higher percentage of red pine seedlings, which is the desired regen. The residual overstory is very patchy. Some areas of the stand there are no stems and in other parts there is over 100 basal area.
6	4133 - Aspen, Mixed Pine	High Density Pole	23.0	43		Aspen stand with white pine. Cut this stand in 10 years when the aspen is mature.
7	42210 - Natural Red Pine	High Density Log	8.4	87	81-110	Stand was last thinned on contract 031-05-01 in 2009. Pine was thinned and all aspen, maple, spruce, balsam fir, and birch were cut out. This stand needs to be harvested now, before there is too much advanced regeneration and we will not be able to regenerate red pine.
9	6119 - Mixed Lowland Deciduous Forest	High Density Pole	47.4	79	81-110	Lowland deciduous stand, with some more upland areas with red maple.
11	4134 - Aspen, Spruce/Fir	High Density Pole	53.1	33		Aspen stand with some residual species left after the previous harvest. Clearcut when aspen is mature.
13	42290 - Natural Mixed Pine	High Density Log	69.1	87	51-80	Stand was thinned in 1993 and than again in 2008 on contract 032-05-01. The stand still has a dense overstory in most areas of the stand, which will enable shade tolerant species to seed in, but will discriminate against red pine. This stand is a very high quality red pine site and should be managed for it.

S t	Escanaba		Report 8	Forested	Stands Compartment: 041 Year of Entry: 2015		
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
14	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	70.0	87	51-80	This stand was cut on contract 032-05-01 in 2007-08. The western 1/3 rd of the stand had the aspen, spruce, balsam fir, and birch cut and the western 2/3 rds had the aspen and birch and maple over 9 inches cut. Overall this stand has too dense of an overstory to regenerate.	
16	6122 - Black Spruce	Low Density Pole	9.1	87		Stand was cut on contract 033-90-01 in 1991. All stems greater than 7 inches was cut. Overall the stand is lowland but there are some upland portions. This stand is featuring the residual stems, but the understory is fully stocked. Manage this stand based on the understory. There is not enough of the residual overstory to harvest it.	
18	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	17.5	72		This stand is a mix of cover types and upland/lowland. Overall most of the species within the stand are not yet mature.	
19	42210 - Natural Red Pine	High Density Log	13.4	87	141-170	This stand was last cut 22 years ago, which opened the stand up enough to allow areas of the stand to regenerate to a mix of upland conifer species, heavy to pine. There are some low pockets within the stand.	
21	42210 - Natural Red Pine	High Density Log	60.5	87	81-110	Remove the Old Growth/SCA Designation from this stand, this is not a unique stand or does it provide unique characteristics. Stand was last thinned in 1993. The Cedar River Pathway traverse through this stand. The stand still has a dense overstory in most areas of the stand, which has enabled some shade tolerant species to seed in, but will discriminate against red pine. This stand is a very high quality red pine site and should be managed for it.	
22	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	18.0	87		Poor quality lowland decduous stand, that averages about 60 basal area. Stand is mostly a mix of red maple and ash. This stand should be harvested now while we are harvesting the adjacent stands and to salvage the ash prior to the arrival of EAB. By cutting this stand it will push it towards more maple, spruce, and tamarack.	
23	4113 - R.Maple, Conifer	High Density Pole	15.1	73	51-80	Poor quality red maple stand with a dense understory of spruce, pine, and balsam fir. The advanced regen needs to be released before it becomes stunted and gets too tall to operate in without destroying the regen. Part of this stand continues into comp 40, cut this portion of the stand at the same time.	
24	42290 - Natural Mixed Pine	Medium Density Log	35.7	87	1-50	This stand was last cut in 1993 on contract 014-91-01. The pine was marked to cut and all other species over 7 inches was cut; except hemlock and cedar. This is a two-aged stand; the overstory is primarily a mix of mature white and red pine and the understory is a mix of upland conifers. The advanced regen is very dense throughout most of the stand, except where there the overstory is dense. The overstory needs to be removed to release the advanced regen.	
25	4319 - Mixed Upland Forest	High Density Sapling	44.0	20		Stand was cut on contract in 1993. The Cedar River Pathway runs through the eastern half of this stand.	

s t	Escanaba Mgt. Unit			Report 8	– Forested	Stands Compartment: 041 Year of Entry: 2015	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
26	6122 - Black Spruce	High Density Pole	4.3	87		Nice quality black spruce stand with areas of good quality red pine. A portion of this stand continues into comp 40, treat that portion as well with this stand.	
27	4311 - Pine, Aspen Mix	High Density Sapling	13.5	20		Stand was clearcut on contract 014-91-01 in 1993. All species greater than 6 inches were cut; except pine, hemlock, and cedar. The pine was marked to cut. This stand was cut with stand 29, but this area is heavier to aspen.	
29	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	22.5	87		Overall poor quality lowland hardwood stand with thick conifer understory. The stand is low overall. Salvage the ash before EAB moves in and we ahve the opportunity to increase the conifer component of this stand by releasing the advanced conifer regen.	
30	42200 - Natural White Pine	High Density Pole	4.3	74	81-110	Stand was cut in 1993 on contract 014-91-01. All species greater than 6 inches were cut; except cedar, hemlock, and pine. Some pine was marked to cut. Poor quality white pine stand with a thick understory of red maple saplings.	
31	429 - Mixed Upland Conifers	High Density Sapling	36.4	20		Stand was cut in 1993 on contract 014-91-01. All species greater than 6 inches were cut; except cedar, hemlock, and pine. Some pine was marked to cut. This is a two-aged stand and it is fully stocked.	
32	6127 - Lowland Pine	Medium Density	20.1	11		Stand was clearcut in 2002 on contract 040-00-01. All species were cut; except cedar, hemlock, and some seed trees. Stand has fully regenerated to a mix of conifer species. The stand is a mix of upland and lowland, but overall there is more low ground.	
33	6122 - Black Spruce	High Density Pole	7.0	46		Poor quality stand that is fully stocked, primarily with black spruce and red maple.	
34	6122 - Black Spruce	High Density Pole	33.0	80		This stand will be removed from SCA/old growth status - this stand does not provide any unique characteristics or features that need to be preserved. This stand is a mix of black spruce and red pine and also a mix of upland and lowland. The spruce has become stunted over the last 20 years.	
35	4113 - R.Maple, Conifer	Medium Density Pole	8.8	87	51-80	This stand was cut in 2007 on contract 032-05-01. All aspen, birch, balsam fir, and spruce was cut along with all maple greater than 12 inches. The residual maple is poor quality and the tops are dying back after being opened up. The overstory is currently too dense to allow enough sunlight to have the other species regenerate. So by removing the overstory now, the aspen, balm, balsam. spruce, and white pine will regenerate better and the maple will stump sprout.	
36	42210 - Natural Red Pine	High Density Log	79.4	89	81-110	Stand was cut in 1993 on contract 014-91-01. All species greater than 6 inches were cut; except cedar, hemlock, and pine. Some pine was marked to cut. The Cedar River Pathway runs through this stand. Overall this stand has mature red pine throughout, but there are pockets where there was little pine left from the last harvest and these areas have fully regenerated to a mix of upland conifer and red maple. This stand needs to be cut now to regenerate the red pine. Overall the stand is upland, but there are some low wet areas mixed in.	

S t	Escanaba Mgt. Unit			Report 8 – Forested Stands			Compartment: 041 Year of Entry: 2015	DNR DNR
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range		General Comments:	M/CHIGAN 6
37	6139 - Mixed Lowland Forest	Medium Density	19.3	24		cut; except pine, heml	1989 on contract 014-87-01. ock, and cedar. The Cedar through part of this stand.	
39	42210 - Natural Red Pine	Medium Density Log	14.8	90	51-80	cut; except pine, her The red pine is mate areas where there waten with a mix of species	1 on contract 040-00-01. All nlock, and cedar. The pine ure, it is time to regenerate the sn't much residual pine, the es. This is a high quality reduld be managed for that.	was thinned. ne stand. In stand is filling
40	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	12.9	87	51-80	balsam fir, and birch maple stand with po aspen, the aspen has	on contract 032-05-01. All and was cut. The stand is a low ckets of pine. In places whe sprouted but if the overstory gen will become stunted and	v quality red re there was r isn't removed
41	429 - Mixed Upland Conifers	Medium Density Pole	57.2	80		purchased by the s 2004. This stand is stand was really open to a mix of species.	rivately owned last entry peritate in 2009. The stand was a mix of upland and lowland ed up before the stand is reg Some areas still have a densil white pine and red maple a	cut around . Where the generating well se overstory.

Report 9 - Nonforested Stands

Compartment: 041 Year of Entry: 2015



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
8	3105 - Mixed Upland Herbaceous	7.7	No	Unspecified	
10	6220 - Alder/willow	2.4	No	Unspecified	
12	6220 - Alder/willow	3.6	No	Unspecified	
15	6220 - Alder/willow	57.3	No	Unspecified	
17	6224 - Treed Bog	27.0	No	Unspecified	
20	6220 - Alder/willow	21.2	No	Unspecified	
28	6220 - Alder/willow	66.2	No	Unspecified	
38	6224 - Treed Bog	3.9	No	Unspecified	
42	6220 - Alder/willow	6.8	No	Unspecified	
43	6220 - Alder/willow	5.7	No	Unspecified	