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Compartment Review Presentation

Escanaba Forest Management Unit

Compartment 33
Entry Year 2015
Acreage: 588

County Menominee

Management Area: Green Bay Lake Plain

Revision Date: 06/24/2013

Stand Examiner: Dan Racine

Legal Description:

37N R25W SECTIONS 13 AND 14

Identified Planning Goals:

The majority of the lowland cover type is cedar with areas of mixed lowland conifer and deciduous species. The management within the lowland cover types is in the cover types of tamarack and mixed deciduous species. The goal is to regenerate these cover types to the overstory mix of species. The upland cover types within this compartment are hemlock, northern hardwood, aspen, and mixed maple/birch and softwood stands. The treatments within the hemlock stands are selection harvests utilizing the shorter lived species and creating canopy gaps by removing hemlock and pine in the areas where shorter lived species are being removed. The treatments within the red maple and conifer stands are shelterwood and clearcut harvests designed to regenerate the maple and other existing deciduous species and expand the existing conifer regeneration. The higher quality maple stands are single tree selection harvests removing some of the ash volumes and improving the existing stand quality. There is one clearcut scheduled in an aspen stand to regenerate aspen, maple, and spruce/fir.

Soil and topography:

Most of the compartment is swamp with Lupton-Tawas as the predominate soil type. The uplands are Onaway loam drumlins.

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

The ownership to the east and the south is state land with private ownership to the west and interspersed ownership to the north.

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

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine (lake) sand and gravel and medium textured glacial till. The glacial drift thickness varies between 10 and 50 feet. The Ordovician Trenton formation underlies the glacial drift. The Trenton is quarried for stone west of Escanaba. This area has not been leased recently for metallic exploration. A gravel pit is located one mile to the south and potential appears to be good on the upland drumlins. No economic oil and gas production has been found in the UP.

Vehicle Access:

The western portion of the compartment is accessed through private land only with no public or gauranteed department access. The eastern portion of the compartment can be accessed for management purposes only with no public access.

Survey Needs:

Some corners will have to be requested to prepare timber sales.

Recreational Facilities and Opportunities:

There are no developed facilities within this compartment. Access to the general public is limited to foot access only.

Fire Protection:

There are very few hazardous fuels for fire protection. Access would be difficult if a fire did start.

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

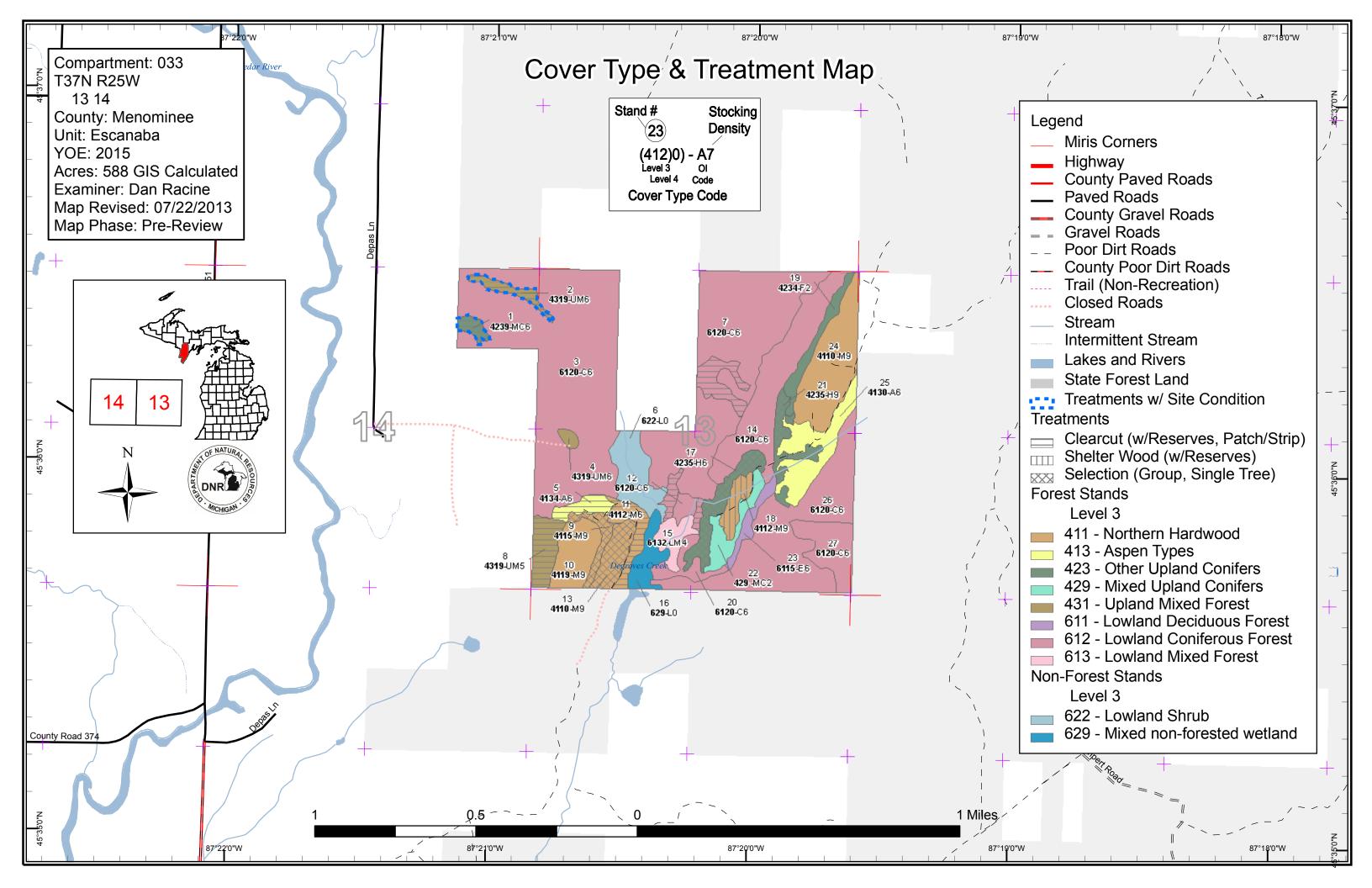
The following information is displayed, where pertinent, on the attached compartment maps:

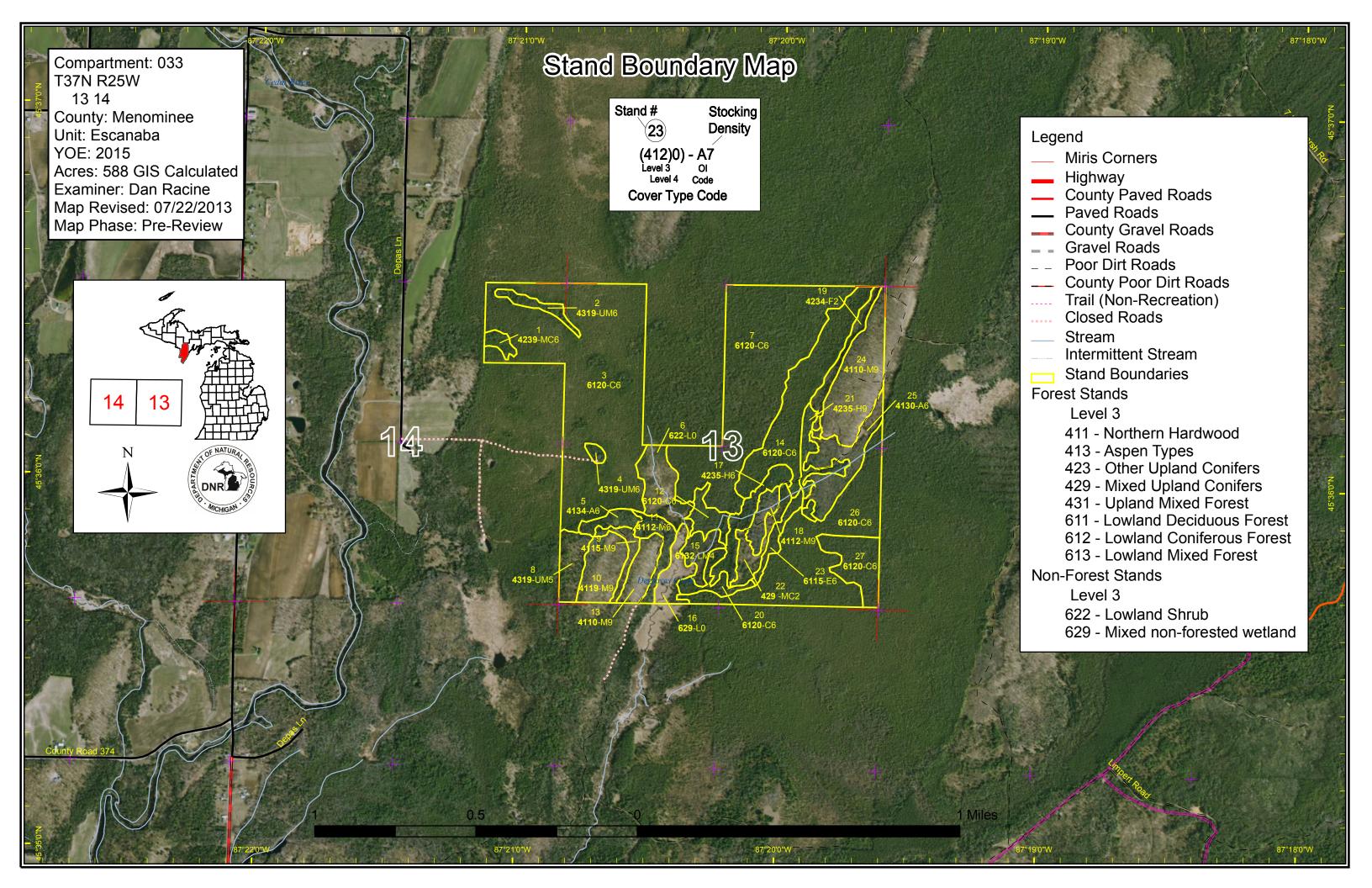
Base feature information, stand boundaries, cover types, and numbers

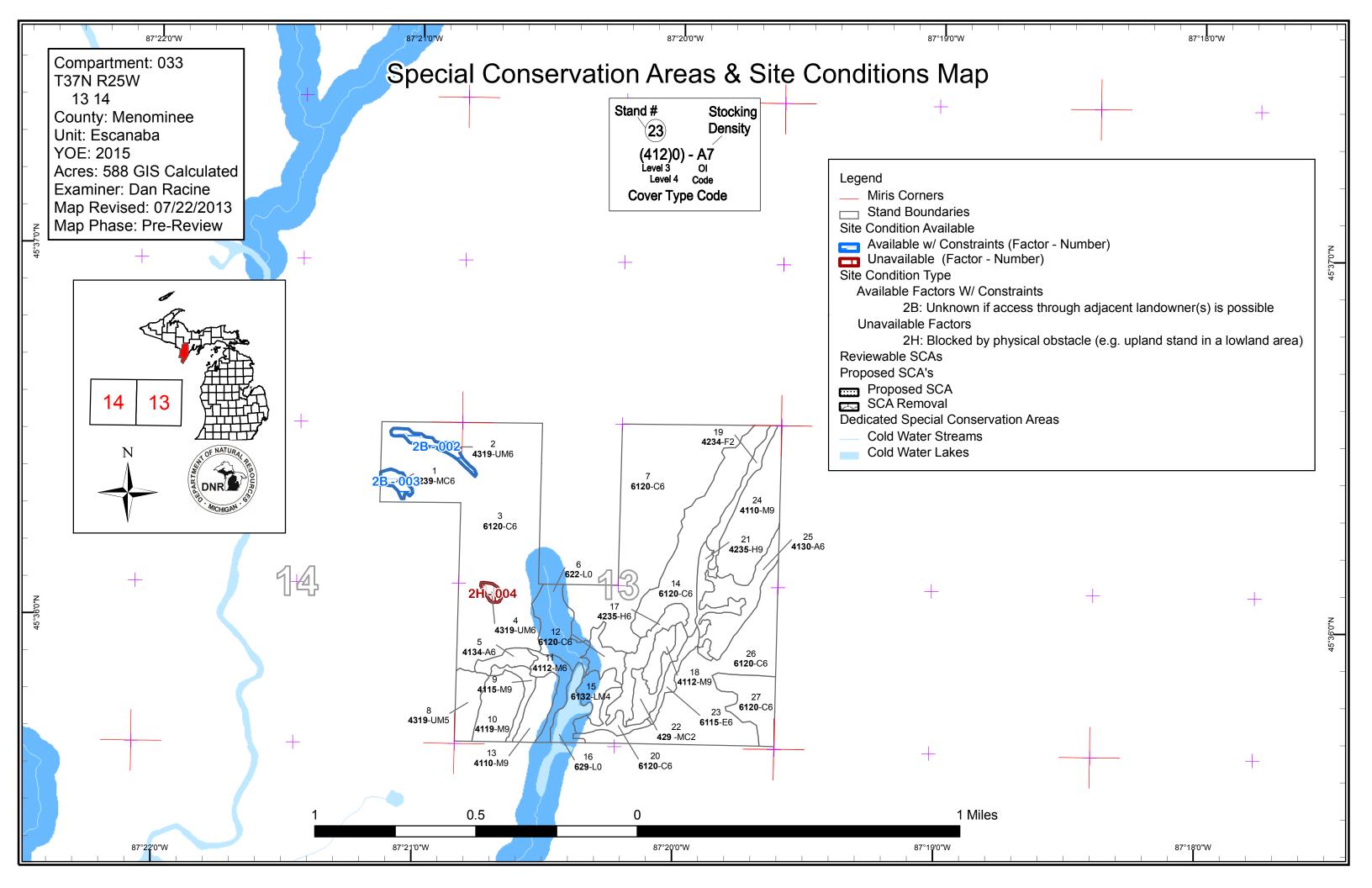
Proposed treatments

Site condition boundaries

Details on the road access system







Report 1 - Total Acres by Cover Type and Age Class

Escanaba Mgt. Unit

Compartment 033 Year of Entry 2015

Dan Racine : Examiner



Age Class Nage A 70,70 10,0 80°58 \$0.00 \$0.00 70× Aspen Cedar Hemlock **Lowland Deciduous Lowland Mixed Forest** Lowland Shrub Northern Hardwood Upland Conifers Upland Mixed Forest Upland Spruce/Fir Total



Report 2 – Proposed Treatment Summaries

Escanaba Mgt. Unit Year of Entry 2015

Compartment 033 Total Compartment Acres: 588

Acres by Treatment Type

Commercial Harvest - 86

Tree Planting - 0

Other - 0

Habitat Cut - 0

Opening Maintenance - 0

		Cover Type by Harvest Method							
		/	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Section of	No. of St.	S. S	Cinting Oct		Se pro-
Aspen Types		5	0	0	0	0	0	5	
Lowland Coniferous Forest		13	0	0	0	0	0	13	
Northern Hardwood		9	15	0	6	0	0	30	
Other Upland Conifers		3	19	0	0	0	0	22	
Upland Mixed Forest		15	0	0	0	0	0	15	
	Total	45	34	0	6	0	0	86	

Report 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 033 Year of Entry 2015

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	33033005-Cut	5.4	4134 - Aspen, Spruce/Fir	High Density Pole	41		Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal

Prescription Clearcut with reserves- Cut all trees except leave cedar that would be found along the edge. Leave the yellow birch and some spruce and fir Specs:

seed trees

Other Access will be required through private most likely through the south or potentially from the west.

Comments:

Next Acceptable regeneration of aspen, maple, and spruce/fir. Monitor the regeneration at appropriate intervals.

Steps:

S

<u>Proposed</u>

Start Date: 10/01/2014

7 33033007-8.7 6120 - Lowland High 85 Harvest Clearcut 6121 - Tamarack Cmpt. Review Cedar Density Proposal Cut_small Pole

Prescription Clearcut- Cut all trees except there may be some larger diamter white pine within the larger stand that can be left if found within the treatment

Specs:

<u>Other</u> Old winter road through stand 14 comes close to the treatment area. There is enough tamarack surrounding the stand for a seed source.

Comments:

Monitor the regeneration at appropriate intervals. Acceptable regeneration of tamarack. Next

Steps:

Proposed

Start Date: 10/01/2014

33033008-Cut 10.5 4319 - Mixed Medium 83 51-80 Harvest Clearcut with 4113 - R.Maple. Cmpt. Review **Upland Forest** Density Reserves Conifer Proposal

Pole

Prescription Clearcut with reserves- Cut all trees except for cedar and hemlock. May leave some white pine or all depending on wether its a potential good Specs:

wildlife tree.

Other_ This stand was selection/shelterwood cut last time

Comments:

Next

Steps: **Proposed**

10/01/2014 Start Date:

33033009-Cut 5.2 4115 - Y.Birch, High 81-110 Single Tree 4112 - Maple, Cmpt. Review 83 Harvest Beech, Cherry Hemlock NH Density Log Selection Proposal Association

Prescription Selection harvest- Focus the harvest on the ash due to EAB concerns. All ash that is 6 inches and greater dbh will be harvested and other species may be harvested throughout leaving a residual BA of 70. The exception will be in the pockets that have a higher percentage of ash will Specs:

have a lower residual BA.

Portions of this stand were not harvested or left with a higher residual BA from the previous harvest. Stands 9, 10, and 13 will be managed as Other Comments: one stand in subsequent treatment periods and will be managed to enhance the existing stand quality. Slightly lower ground on the south end of

the stand than the north end.

Monitor the regeneration at appropriate intervals in subsequent treatments. Expect regeneration of ash and balsam fir with some maple this <u>Next</u>

treatment period. Steps:

Proposed

Start Date: 10/01/2014

Report 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 033 Year of Entry 2015

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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
11	33033011-Cut	8.7	4112 - Maple, Beech, Cherry Association	High Density Pole	83	51-80	Harvest	Clearcut with Reserves	4113 - R.Maple, Conifer	Cmpt. Review Proposal

Prescription Clearcut with reserves- Clearcut leaving hemlock, cedar, and yellow birch for reserve species.

Specs

S

Other The stand has a high density of balsam fir regeneration. The harvest will try to establish some of the maple, balm, and aspen regeneration and

Comments: expand the balsam fir regeneration.

Monitor the regeneration at appropriate intervals expect balsam fir, maple, and balm/aspen regeneration. <u>Next</u>

Steps:

<u>Proposed</u>

Start Date: 10/01/2014

33033012-Cut 4.3 6120 - Lowland High 111-140 Harvest Clearcut with 4113 - R.Maple, Cmpt. Review Density Reserves Conifer Proposal Cedar

Pole

Prescription Clearcut with reserves- Cut all trees within the treatment areas identified on the map except do not cut any white pine or hemlock if placed within

the treatment area. Specs:

<u>Other</u> An intermittent stream/drainage runs north south through the middle portion of the stand. Harvest will be in the winter months.

Comments:

Monitor the regeneration at appropriate intervals. Expect maple, and balsam fir regeneration.

Next Steps:

Proposed

10/01/2014 Start Date:

33033013-Cut 10.0 4110 - Sugar Maple 78 81-110 Harvest Single Tree 4110 - Sugar Maple Cmpt. Review 13 High Association **Density Log** Selection Association Proposal

Prescription Selection Harvest- Retain approximately 70 BA throughout focusing on ash removal due to EAB concerns. A mix of all species will be harvested

Specs: throughout.

A ridge that runs northeast through the stand has some nice quality white ash. Balsam fir and sugar maple poles in the understory. <u>Other</u>

Comments:

Monitor the regeneration at appropriate intervals. Acceptable regeneration of northern hardwood species. Next

Steps:

Proposed

10/01/2014 Start Date:

33033017-Cut 12.7 42350 - Upland High 104 Harvest Single Tree 4312 - Hemlock. Cmpt. Review 17 Hemlock Density Selection Mixed Deciduous Proposal Pole

Prescription Selection harvest- The harvesting of the shorter lived species within the hemlook stand. Leave most or all of the yellow birch and some spruce seed trees. The hemlock, cedar and pine harvested in this stand will be in the locations with higher percentages of shorter lived species creating

group selection canopy gaps.

Other Limit the harvesting of cedar, hemlock, or pine in the areas with fewer shorter lived species.

Comments:

Specs:

FTP for scarifying if feasible in the canopy gaps created. Monitor regeneration at appropriate intervals. Acceptable regeneration of hemlock,

Next Steps: pine, and deciduous species.

Proposed

10/01/2014 Start Date:

Report 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 033 Year of Entry 2015

DEPARTME	DNR MICHIGAN	100000000000000000000000000000000000000
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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
18	33033018-Cut	6.3	4112 - Maple, Beech, Cherry	High Density Log	78)	81-110	Harvest	Shelterwood	4113 - R.Maple, Conifer	Cmpt. Review Proposal

Prescription Shelterwood Harvest- Retain approximately 30 BA on average. Leave any hemlock and pine.

Specs:

s

The overstory is red maple to the south with more sugar maple to the north. There is not enough quality sugar maple to thin this stand to Other enhance the quality. The understory is medium to pockets with high density of balsam fir and some pine mixed in. Look to remove the overstory Comments:

in the next treatment periods.

Monitor regeneration at appropriate intervals. Acceptable regeneration mix of conifer and mixed deciduous. <u>Next</u>

Steps:

Proposed

Start Date: 10/01/2014

33033021-Cut 6.0 42350 - Upland High 104 Harvest Single Tree 42350 - Upland Cmpt. Review Hemlock Selection Hemlock **Density Log** Proposal

Prescription Single tree selection- Harvest of all the shorter lived species. Hemlock will be harvested in the areas where higher amounts of shorter lived

species are harvested creating group selection canopy gaps. Retain all other hemlock. Retention of a portion of the stand to the east. Specs:

Other Some very large diameter shorter lived species.

Comments:

Next FTP for scarification in the gaps if feasible. Monitor the regeneration at appropriate intervals. Acceptable regeneration mix of aspen, maple, and Steps:

Proposed

Start Date: 10/01/2014

Total Treatment

77.8 **Acreage Proposed:**

S t		Escanaba Mgt. Unit Report 4 Treatments Prescribed with a Limiting Factor					l with	Compartment: 033 Year of Entry 2015	OF NATURAL AND SOURCE	
a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	33033001-Cut	3.1	42390 - Mixed Non- Pine Upland Conifers	High Density Pole	89	81-110	Harvest	Clearcut with Reserves	42380 - Non Pine Upland Conifer, Mixed Deciduous	Cmpt. Review Proposal
	Prescription Clearcut with Reserves- Cut all trees except for cedar and hemlock. Specs:									
	Other The access to this stand is through the private landowner to the west. The permission to carry out treatment from private landowner is unknown. Comment:									
<u>Next</u> Steps	Next Secure permission to prepare and carry out treatment. After the treatment takes place monitor regeneration at appropriate intervals. Acceptable regeneration of any mixed deciduous and coniferous species present.									
Propo Start)14								
Limitii	ng Factor	2B:	Unknown if access thr	ough adjac	ent land	owner(s) i	s possible			
2	33033002-Cut	4.8	4319 - Mixed Upland Forest	High Density Pole	82	81-110	Harvest	Clearcut with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
	Prescription Clearcut with reserves- Cut all trees except leave approximately 20 BA of cedar, a few red maple and a couple of spruce and fir seed trees. Leave all the hemlock.									
Other Comn			or dying along with par nter road will allow ac				down. The stand	is limited by acce	ss through the private la	and owner to
<u>Next</u> Steps			private landowner to ation mix of any conif		•			ne regeneration at	appropriate intervals af	ter the harvest.

2B: Unknown if access through adjacent landowner(s) is possible

Total Treatment

Start Date: 10/01/2014

<u>Proposed</u>

Limiting Factor

Acreage Proposed: 7.9

Report 5 – Site Conditions

Escanaba Mgt. Unit

Dan Racine: Examiner

100%

0%

Compartment 033 Year of Entry 2015

Avail	ability for I	Management					
Total	Acres	Acres	[Domina	nt Site	Cond	ditions
Acres	Available	Not Available		No	2H	2B	
26	26		Aspen	26			
385	385		Cedar	385			
22	22		Hemlock	22			
5	5		Lowland Deciduous	5			
7	7		Lowland Mixed Forest	7			
79	79		Northern Hardwood	79			
13	13		Upland Conifers	9		3	
17	15	2	Upland Mixed Forest	10	2	5	
8	8		Upland Spruce/Fir	8			
561	560	2	Total Forested Acres	552	2	8	

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 Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002	Available	2B: Unknown if access through adjacent landowner(s) is possible	5				
	omments: ne access is throug	gh the private landowner to th	e west.	Unknown if the landowner	will provide permission.		
	•	,			· ·		
003	Available	2B: Unknown if access through adjacent landowner(s) is possible	3	No Limiting Factor			
	omments: nknown if we can (get permission from the privat	e landov	wner to the west.			
004	Not Available	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	2	No Limiting Factor	2E: Road needed		
C	omments:						

Compartment: 033 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
Comments				

Compartment: 033
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 Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area				
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen condition stocked trout populations and those of other coldwater fish specific conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable by are relatively deep, have substantial the state. Such lakes are established by				
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from treat to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.					
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high d communities are ecologically and socially significant in their effect as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, iversity of plants and wildlife. Riparian cts on water quality and quantity, as well				

S	Escanaba	Escanaba Mgt. Unit			– Forested	Stands Compartment: 033 Year of Entry: 2015
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42390 - Mixed Non- Pine Upland Conifers	High Density Pole	3.1	89	81-110	Access through the private land to the west.
2	4319 - Mixed Upland Forest	High Density Pole	4.8	82	81-110	The balsam fir is dead and dying with lots of blowdown. Areas of blowdown regenerating to balsam fir between 18 inches up to 5-10 feet. No age was obtained from increment borer. Used previous inventory.
3	6120 - Lowland Cedar	High Density Pole	145.4	81		This stand is a mix of poor quality 1-2 stick cedar with some black ash mixed in and areas more to the south with 8-9 inch cedar and some black spruce mixed in. Balsam fir is dead. Tag alder is low to medium density in the understory. A couple of small hardwood islands within the stand. No age was able to be obtained from the cedar. Used previous Inventory.
4	4319 - Mixed Upland Forest	High Density Pole	1.7	89	111-140	The balsam fir is mostly dead. Upland island in the cedar swamp. Did not get an age from the increment borer. Used previous OI for age. One BA swing due to the size of the stand.
5	4134 - Aspen, Spruce/Fir	High Density Pole	5.4	41		Mix of 9 inch and smaller diameter aspen. Trace amounts of: white ash, yellow birch, and black spruce.
7	6120 - Lowland Cedar	High Density Pole	102.4	85		Smaller diameters to the west. Trace amounts of white pine, black spruce, and black ash. Treatment in the larger diameter tamarack pocket of the stand. Access though the cedar swamp through old winter road. Expect tamarack and cedar regeneration post-harvest. The treatment area is mostly tamarack to areas with 50/50 cedar and tamarack. 70 On increment borer on average stand for cedar and 82 on increment borer on tamarack on average stand.
8	4319 - Mixed Upland Forest	Medium Density Pole	10.5	83	51-80	A pocket of cedar to the south. This stand was cut under the Degraves E-W sale with birch, aspen, 2 or more stick spruce and fir and smaller diameter hardwood cut. Trace amount of paper birch in the overstory and tamarack in the understory. Minimal stump sprouting of maple with lots of deer browse. A small clump of larger white pine. Used the age from adjacent maple stand.
9	4115 - Y.Birch, Hemlock NH	High Density Log	5.2	83	81-110	This stand was last cut under the Degrave E-W sale in 2009. Trace amounts of green ash and paper birch. Used adjacent maple stand for age.
10	4119 - Mixed Northern Hardwoods	High Density Log	15.7	78	51-80	There are trace amounts of black cherry, cedar, basswood. This stand was cut under the Degraves E-W sale in 2009. Used another stand for age.
11	4112 - Maple, Beech, Cherry Association	High Density Pole	8.7	83	51-80	Trace amount of Hemlock,ironwood,cedar, balm and aspen. Edge of the Degraves E-W sale not cut last time.
12	6120 - Lowland Cedar	High Density Pole	7.3	81	111-140	Trace amounts of balsam fir in the overstory. The balsam in the understory is medium to high density in the treatment area. No age on the cedar in this stand.

S t	Escanaba		Report 8	– Forested	Stands Compartment: 033 Year of Entry: 2015		
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
13	4110 - Sugar Maple Association	High Density Log	10.0	78	81-110	Trace of basswood. This stand was cut in 2009 under the Degraves E-W sale. Used other sugar maple stand for age.	
14	6120 - Lowland Cedar	High Density Pole	42.0	101			
15	6132 - Mixed Lowland Forest with Cedar	Low Density Pole	7.3	81		Very open stand that is wet and poor quality with a creek that runs through.	
17	42350 - Upland Hemlock	High Density Pole	12.7	104		The south portion was part of the Degraves E-W sale.	
18	4112 - Maple, Beech, Cherry Association	High Density Log	6.3	78	81-110	The southern portion of the stand is more to red maple with higher amounts of balsam fir regeneration and the northern portion is higher to sugar maple with medium density balsam fir regeneration. Scattered white pine regeneration. This stand was last cut in 1991 under the Section 13 Hardwoods Sale.	
19	42340 - Upland Spruce/Fir	Medium Density	7.8	24		This stand was cut under the Section 13 hardwoods sale. Mix of 50-75 and 75-100% cover type. Trace amount of red maple.	
20	6120 - Lowland Cedar	High Density Pole	7.0	81		Unable to obtain age from increment borer. Used the previous inventory.	
21	42350 - Upland Hemlock	High Density Log	9.0	104		Trace amounts of beech. Some very large diameter aspen, birch, and maple. Portions of this stand is pockets left from the Section 13 hardwoods. Used previous inventory on adjacent stand for age on a hemlock.	
22	429 - Mixed Upland Conifers	Medium Density	9.5	22		Last cut in 1991 under the Section 13 Hardwood sale. Proposed for discing and seeding last entry period. Filling in with a mix of species.	
23	6115 - Lowland Ash	High Density Pole	5.3	65		Trace amounts of Green Ash, yellow birch, and hemlock.	
24	4110 - Sugar Maple Association	High Density Log	32.6	78	81-110	This stand was last cut in 2009 under the Degraves E-W sale. Treat next treatment period. One Plot with White Ash on the north end. Aged a basswood for increment borer.	
25	4130 - Aspen	High Density Pole	20.6	27		Cut in 1992 under the Section 13 hardwoods sale.	
26	6120 - Lowland Cedar	High Density Pole	65.0	87		There is some cedar regeneration here along the line of stand pre-inventory stand 27 and 28.	
27	6120 - Lowland Cedar	High Density Pole	16.2	91		Some places with quite a bit of cedar regeneration. Trace amounts of black spruce in the canopy. Used the previous inventory for age.	

Report 9 - Nonforested Stands

Compartment: 033 Year of Entry: 2015



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
6	6229 - Mixed lowland shrub	16.8	No	Unspecified	Lowland shrub with creek through the middle.
16	629 - Mixed non-forested wetland	9.3	N\A	Unspecified	