

Escanaba Forest Management Unit Compartment Review Presentation Compartment 93 Entry Year: 2012

Compartment Acreage: 1,640 County: Delta

Revision Date: August 25, 2010

Stand Examiner: Dan Racine, Forester, FMD; Bill Rollo and Craig Albright, Wildlife Division

Legal Description: T43N R22W Sections 3, 10, and 15

Identified Planning Goals: Deadhorse Moraine

Management Goals: This compartment is comprised of 697 acres of upland forest with the majority of that cover type in aspen and northern hardwoods. The remainder of the acres in upland forest consists of mixed upland deciduous, paper birch, and upland mixed forest. There is 843 acres of lowland forest acres with the majority of the cover type in cedar. The remainder of the acres in lowland forest consists of tamarack, lowland conifers, lowland deciduous, and lowland balm/aspen. There is 99 acres of non forest consisting of herbaceous open land, lowland shrub, marsh, and water. There are nine stands proposed for treatment this entry period. Stand 4 is proposed for clearcut in an upland aspen spruce/fir stand. Stand 13 is proposed for clearcut in a lowland conifer/mixed deciduous stand. Stands 14, 28, 61, and 62 are proposed for selection harvests in northern hardwood sugar maple associations. Stands 6 and 64 are tamarack stands proposed for seed tree harvest. Stand 35 is a shelterwood harvest in a lowland deciduous/mixed coniferous stand.

Soil and Topography: Topography ranges from level to very gently rolling. Major soil series include Dawson and Greenwood peats; Charlevoix sandy loam; Cathro and Tacoosh mucks; Trenary fine sandy loam; Ensley and Angelica soils; Carbondale, Lupton, and Rifle soils; Longrie sandy loam.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment is part of a block of state land that is about 8 miles long and 4 miles wide in Northern Delta County. The state land also extends into Alger County about four miles, which is part of the Gwinn Forest Management Unit. Ownership other than state around this compartment is mostly small non industrial private forest with several blocks of corporate forest lands.

Unique, Natural Features: None

Archeological, Historical, and Cultural Features: None known.

Special Management Designations or Considerations: None

Watershed and Fisheries Considerations: None

Wildlife Habitat Considerations: About half of this compartment acreage is cedar swamp and the other half is aspen and northern hardwood-dominated upland. The most notable treatment proposed this decade is selection harvest in several northern hardwood stands. Hardwoods have regenerated very well in this compartment in the past, so these treatments will be good for wildlife if regeneration becomes established in the canopy gaps and all representative tree species are maintained or propagated. Stands that were formerly in Special Conservation Area status are recommended for removal because they are entirely lowland conifer types that are not unusual and do not provide unique benefits.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of medium textured glacial till. There is minor relief in the compartment. There is insufficient data to determine the glacial drift thickness. The Ordovician Trenton Formation underlies the glacial drift. The Trenton is quarried for stone/dolomite near Escanaba. A gravel pit is located two miles to the south of the compartment. There appears to be good gravel potential in the compartment.

Vehicle Access: Access to this compartment by vehicle is very good through the majority of the compartment. However access to the compartment by vehicle is through private property.

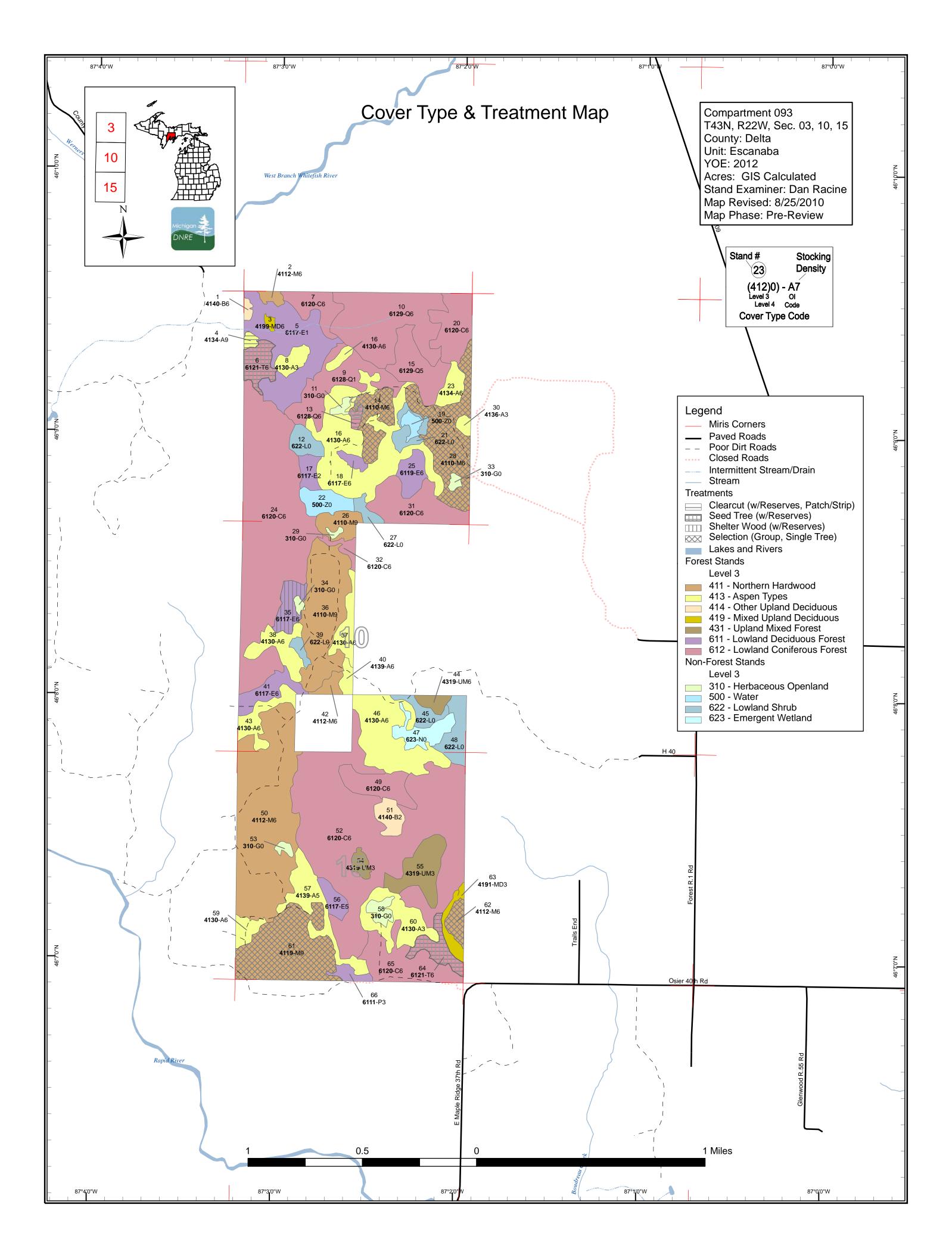
Survey Needs: No additional registered corners will be needed.

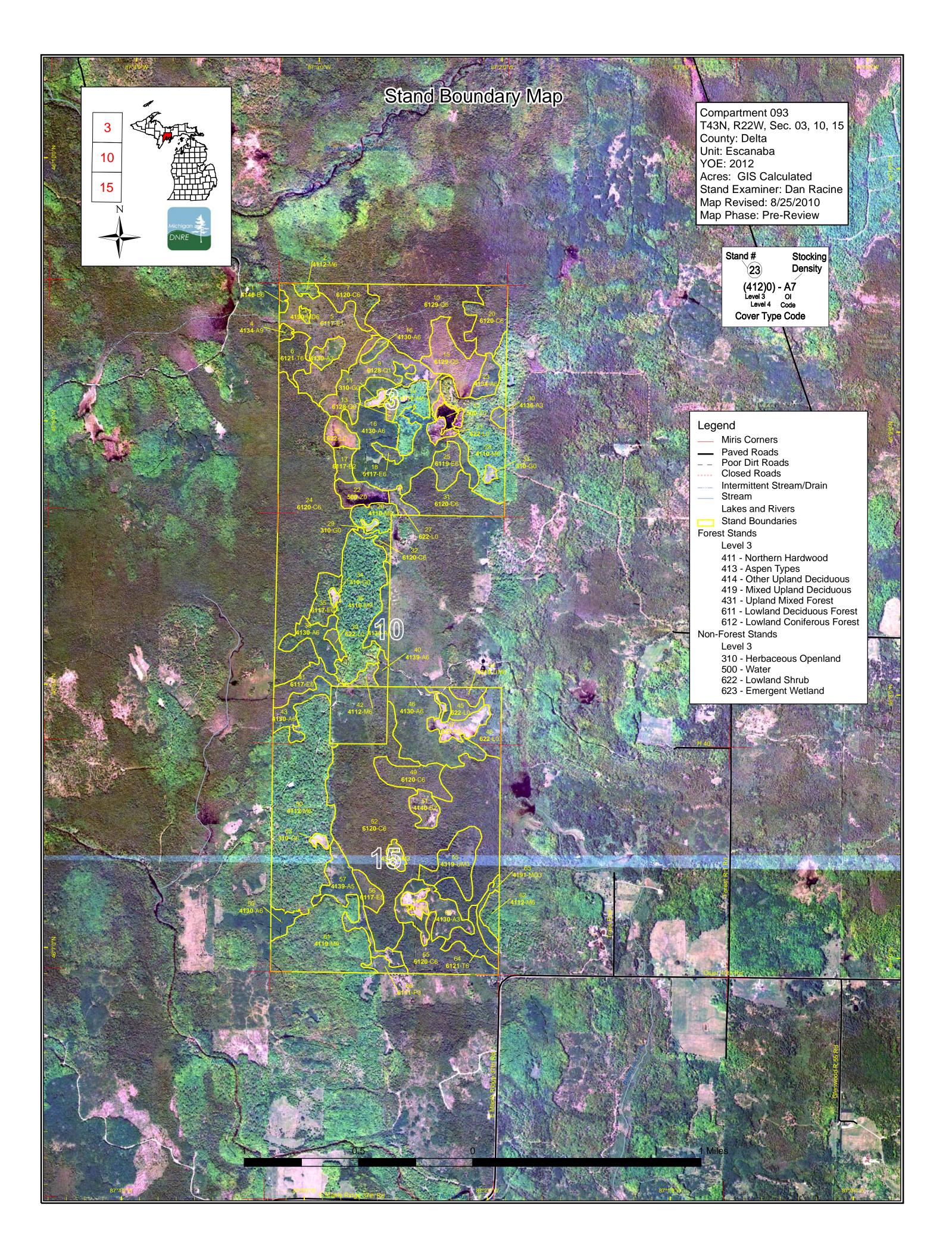
Recreational Facilities and Opportunities: There are no recreational facilities in this compartment. There are hunting opportunities within this compartment.

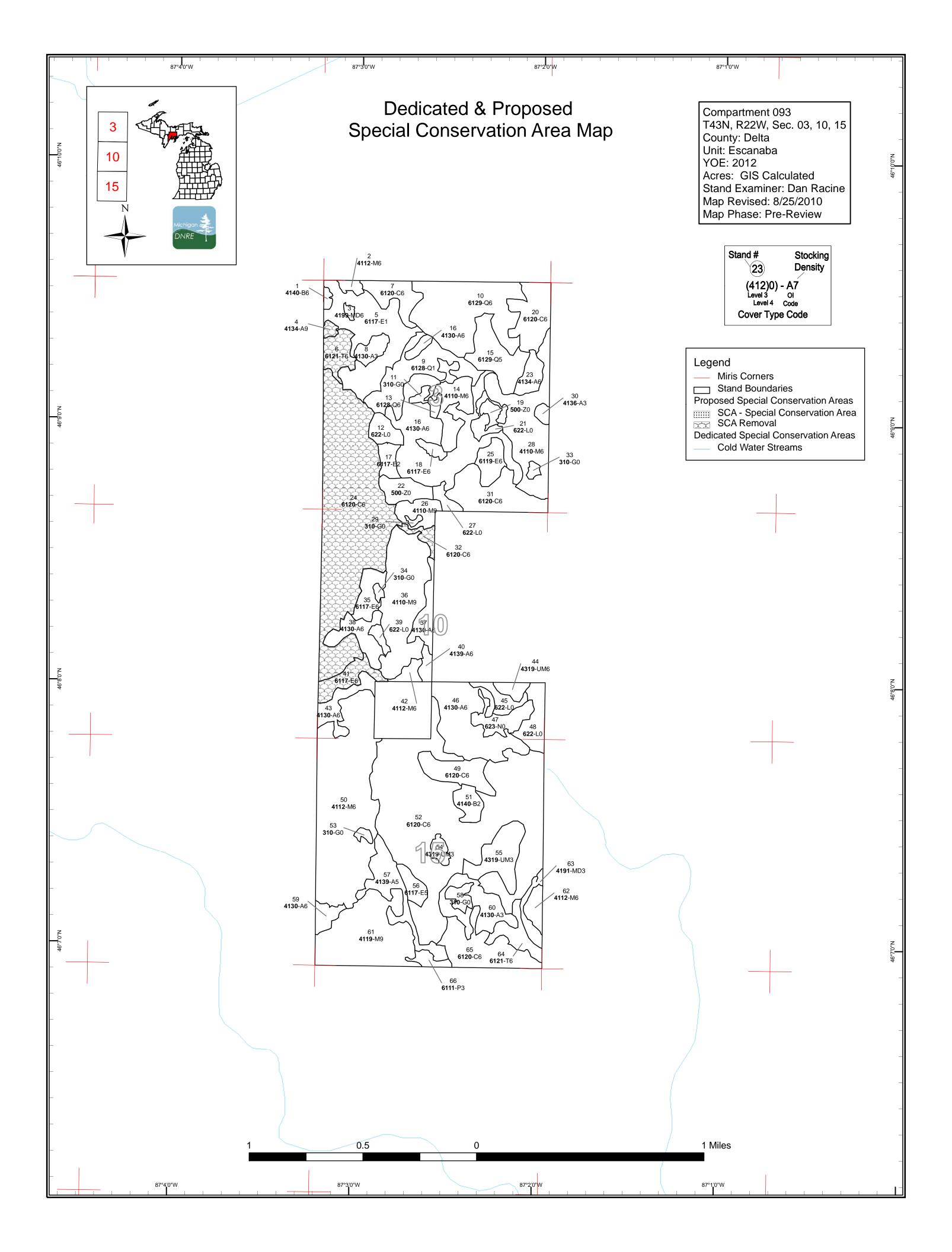
Fire Protection: Most of this compartment is either lowland or northern hardwoods/aspen. The risk of wildfire in this area is low. Access is very good once past the gated private property. There is an abundance of water nearby this compartment.

Additional Compartment Information: Several stands were removed from Special Conservation Area status.

- ➤ The following reports from the Inventory are attached:
 - **♦** Total Acres by Cover Type and Age Class
 - **♦** Proposed Treatment Summary
 - **♦** Proposed Treatments No Limiting Factors
 - **♦** Proposed Treatments With Limiting Factors
 - **♦** Stand Details (Forested and Nonforested)
 - **♦** Dedicated and Proposed Special Conservation Areas
- > The following information is displayed, where pertinent, on the attached compartment maps:
 - ♦ Base feature information, stand boundaries, cover types, and numbers
 - **♦** Proposed treatments
 - **♦** Details on the road access system







Compartment: 093 Year of Entry: 2012



7 - 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.

Data updated before 10:00 AM

Stand	SCA Type	SCA Name	Acres	Comments
4	SCA Removal	33093004	2.4	This stand was removed from SCA-designation
6	SCA Removal	33093006	13.7	This stand was removed from SCA designation.
24	SCA Removal	33093024_SCA_remova	174.3	This stand was removed from SCA-designation
32	SCA Removal	33093032_SCA_remova	5.1	This stand was removed from SCA-designation
41	SCA Removal	33093041_SCA_remova I	14.4	This stand was removed from SCA-designation

6 – Nonforested StandsData updated before 10:00 AM

Michigan DNRE

Compartment: 093 Year of Entry: 2012

Stand	Cover Type	Acres	Gen Cmts:
11	31021 - Cool Season Grass	2.5	This opening was once a wildlife food plot, with a mixture of cool summer grasses (brome, timothy), clover, and birdsfoot trefoil planted. Last mowed in 1999. Trefoil is still present with cool summer grasses.
12	6229 - Mixed lowland shrub	9.5	Appears to be an old beaver flooding. Suspect that it will be a combination of tag alders and sedges.
19	50 - Water	4.3	Old beaver flooding with water. Sedges would dominate ground cover. Lots of dead trees in this flooding.
21	6229 - Mixed lowland shrub	8.8	Most likely a combination of tag alders and sedges, along with some spruce mixed in.
22	50 - Water	13.2	Another old beaver flooding.
27	6229 - Mixed lowland shrub	4.9	Most likely a combination of sedges and tag alders.
29	31021 - Cool Season Grass	1.3	This opening was once a wildlife food plot, with a mixture of cool summer grasses (brome, timothy), clover, and birdsfoot trefoil planted. Last mowed in 1999. Trefoil is still present with cool summer grasses.
33	31021 - Cool Season Grass	2.1	This opening was once planted into a wildlife mix. Last time that this opening was mowed was in 1999. Appears to be planted in a brome, timothy, clover, birdsfoot trefoil mix. Clover is gone, trefoil is low, and the opening is dominated by cool summer grasses.
34	31021 - Cool Season Grass	1.6	This opening was once a wildlife food plot, with a mixture of cool summer grasses (brome, timothy), clover, and birdsfoot trefoil planted. Last mowed in 1999. Trefoil is still present with cool summer grasses.
39	6220 - Alder/willow	3.5	Remote call is tag alders.
45	6229 - Mixed lowland shrub	8.1	
47	6233 - Wet Meadow	14.7	Appears to be a drained beaver flooding. Estimate that sedges are > 60% of the stand, based on aerial photos.
48	6229 - Mixed lowland shrub	15.8	From the aerial photo, appears to be a mixture of several different shrub types.
53	31021 - Cool Season Grass	2.2	This opening was once a wildlife food plot, with a mixture of cool summer grasses (brome, timothy), clover, and birdsfoot trefoil planted. Last mowed in 1999. Trefoil is still present with cool summer grasses.
58	31021 - Cool Season Grass	6.2	This opening was once a wildlife food plot. Seeded in 1993 by hand into a meadow mix.

5 - Forested Stands Compartment: 093 Escanaba Mgt. Unit s Year of Entry: 2012 Data updated before 10:00 AM t а Level 4 Size Stand BA General n **Cover Type** Density Acres Comments: Age Range d 4140 - Other Upland High Density 2.0 30 1 Deciduous Pole 4112 - Maple, Beech, High Density 72 3.4 Other species include cedar, quaking aspen, hemlock. Could 2 Cherry Association Pole treat with stand 1 from compartment 92. 4199 - Other Mixed **High Density** 1.6 74 Island that is factor limited by access problems. 3 **Upland Deciduous** Pole 4134 - Aspen, High Density 2.4 79 upland island. Access would have to be winter time, most likely Spruce/Fir Log through stand 1. There is a small creek/drainage that runs through stand 5. 6117 - Lowland Low Density 60.2 58 mix of non forest trees and shrubs and some forest with an 5 Deciduous, Mixed Sapling upland ridge in the middle. Coniferous 6121 - Tamarack High Density 6 13.7 87 This stand is a piece of tamarack broken out from stand 20. Pole 6120 - Lowland Cedar **High Density** 17.0 140 Poor quality cedar stand. 7 Pole 4130 - Aspen High Density 8.0 17 Upland island harvested in 1995. 8 Sapling 6128 - Lowland Low Density 38.4 58 Treed bog in some places. Mix of forest/nonforest cover type 9 Coniferous, Mixed Sapling Deciduous

6129 - Mixed

Coniferous Lowland

Forest

6128 - Lowland

Coniferous, Mixed

Deciduous

4110 - Sugar Maple

Association

6129 - Mixed

Coniferous Lowland

Forest

4130 - Aspen

6117 - Lowland

Deciduous, Mixed

Coniferous

6117 - Lowland

Deciduous, Mixed

Coniferous

10

13

14

15

16

17

18

High Density

Pole

High Density

Pole

High Density

Pole

Medium

Density Pole

High Density

Pole

Medium

Density

High Density

Pole

73.6

2.6

20.5

28.6

84.0

7.4

3.8

75

87

75

103

42

87

87

81-110

Difficult access.

This stand is a small patch of timber but could be cut with stand

Last harvest was in 1995. The BA is variable from 90-120. Lot

of seeding under 3 feet.

poor quality lowland conifer stand.

Mix of non forest trees and shrubs and poor quality forested.

5 - Forested Stands Compartment: 093 Escanaba Mgt. Unit s Year of Entry: 2012 Data updated before 10:00 AM t а Level 4 Size Stand General BA n **Cover Type** Density Acres Comments: Age Range d **High Density** 6120 - Lowland Cedar 27.0 103 20 Pole 4134 - Aspen, High Density 9.7 32 23 Spruce/Fir Pole 6120 - Lowland Cedar **High Density** 174.3 117 24 Pole 6119 - Mixed Lowland **High Density** 12.2 74 A small patch of upland timber with cherry, aspen, paper birch, 25 **Deciduous Forest** Pole red maple, balsam fir. High Density 4110 - Sugar Maple 75 12.1 81-110 Look to treat with stands 51 and 34 26 Association Log 4110 - Sugar Maple High Density 53.9 75 81-110 North end is high to balsam fir under mix of sugar maple and red 28 Association Pole maple. Variable BA throughout fluctuating from 70-130. This stand was cut last in 1995 under the Bourdeau creek sale. 4136 - Aspen, Mixed **High Density** 2.9 32 This stand is aspen, balm and balsam fir. 30 Conifer Sapling 6120 - Lowland Cedar **High Density** 36.3 117 31 Pole High Density 6120 - Lowland Cedar 5.1 115 Some super canopy yellow birch. This stand is basically a 32 Pole drainage with mostly cedar and mixed deciduous species. 6117 - Lowland **High Density** 85 111-140 12.9 Other species; black cherry, yellow birch. Mixed stand with 35 Deciduous, Mixed Pole pockets of red maple/sugar maple to cedar/black ash. Coniferous 4110 - Sugar Maple **High Density** 65.7 80 51-80 Extremely high sugar maple regeneration especially the north 36 Association Log end of this stand. Other species include black cherry, red maple, 4130 - Aspen **High Density** mix of aspen and balm with a higher percentage of balm in some 12.6 29 37 Pole places. High Density 4130 - Aspen 38 17.7 29 Pole 4139 - Aspen, Mixed **High Density** 4.6 41 40

Deciduous

6117 - Lowland

Deciduous, Mixed

Coniferous

4112 - Maple, Beech,

Cherry Association

4130 - Aspen

41

42

43

Pole

High Density

Pole

High Density

Pole

High Density

Pole

14.4

5.1

14.7

85

75

29

S t	Escanaba	a Mgt. Unit		5 – Forested Star Data updated before 10		ANDARANIA
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	4319 - Mixed Upland Forest	High Density Pole	5.5	61		SOme yellow birch here. BA between 70-80.
46	4130 - Aspen	High Density Pole	51.9	29		
 49	6120 - Lowland Cedar	High Density Pole	21.0	87		
50	4112 - Maple, Beech, Cherry Association	High Density Pole	133.8	73	81-110	This stand has 100 BA average and should be ready to treat next treatment period. Other species include; hemlock, blac spruce, ironwood, white spruce, basswood. The south end stand has a higher percentage of red maple.
 51	4140 - Other Upland Deciduous	Medium Density	10.1	16		
	6120 - Lowland Cedar	High Density Pole	231.9	122		
 54	4319 - Mixed Upland Forest	High Density Sapling	5.0	18		
 55	4319 - Mixed Upland Forest	High Density Sapling	26.0	16		
 56	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	7.9	76		poor quality
57	4139 - Aspen, Mixed Deciduous	Medium Density Pole	27.3	25		High end of 50-75. This stand is a mix of aspen/balm with so conifers. The aspen is a much higher % in some places.
59	4130 - Aspen	High Density Pole	7.2	27		
	4130 - Aspen	High Density Sapling	26.2	23		
—— 61	4119 - Mixed Northern Hardwoods	High Density Log	69.2	75	81-110	Mix of sugar maple and red maple; other species include hemlock, black spruce, ironwood, white spruce. See on the photo the pockets of areas that are dominated by sugar map and sugar maple regeneration.
62	4112 - Maple, Beech, Cherry Association	High Density Pole	7.5	75		The north end goes into more balsam fir/cedar/balm
63	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	7.3	29		Mostly a mix of aspen/balm
	6121 - Tamarack	High Density Pole	13.3	81		This stand was broken out from stand 50
	6120 - Lowland Cedar	High Density Pole	36.8	109		mixed stand with a pockets of balm. Cedar mixed with tag ald black ash areas.

S t	Escanaba	Mgt. Unit			prested Stands red before 10:00 AM	Compartment: 093 Year of Entry: 2012	Michigan DNRE
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
66	6111 - Lowland Balsam Poplar	High Density Sapling	5.1	27			

Escanaba Mgt. Unit Table 4 -- Treatments Prescribed with Compartment: 093 a Limiting Factor s Data updated before 10:00 AM Year of Entry 2012 t а **Treatment** Acres Stage1 Size Stand **Treatment Treatment Cover Type Approval** n CoverType Density Method Objective Status Name Age Type d 62 33093062-Cut 7.5 4112 - Maple, High Density Pole 75 Harvest Single Tree Selection Sugar Maple Cmpt. Review Beech, Cherry Association Proposal Association Prescription Selection harvest; harvest to around 70 BA and create regeneration gaps. Favor to leave minor component species. Open up more around the balsam fir on the north end. Specs: **Other** The north end goes into more balsam fir/cedar/balm Comment: <u>Next</u> Obtain permission from private landowner. After the harvest monitor the regeneration at the appropriate intervals. Steps: Limiting Factor and No 2A: Adjacent landowner denies **Treatment Reason** access Most likely obtain access from the landowner to the east. Cmpt. Review 64 33093064-Cut 13.3 6121 - Tamarack High Density Pole 81 Harvest Seed Tree with Mixed Coniferous Lowland Forest Proposal Reserves Prescription Seed tree harvest; Leave the cedar and leave seed trees throughout. Determine spacing at the time of sale prep. Specs: This stand was broken out from stand 65. **Other** Comment: Obtain permission from landowner to the east. Monitor regeneration at the appropriate intervals. <u>Next</u> Steps: Limiting Factor and No 2A: Adjacent landowner denies

Treatment Reason

access

Most likely access would be from the landowner to the east.

Total Treatment

20.8 Acreage Proposed:

Escanaba Mgt. Unit

Data updated before 10:00 AM

Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 093 Year of Entry 2012 Michigan DNRE

a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
4	33093004-Cut	2.4	4134 - Aspen, Spruce/Fir	High Density Log	79	Harvest	Clearcut	Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal

<u>Prescription</u> Final harvest; Possible leave of some quality spruce for seed source. This stand could be cut with stand 20 Tamarack. <u>Specs:</u>

Other

s

upland island. Access would have to be winter time, most likely through stand 1. There is a small creek/drainage that runs through stand 5.

Comments:

Next Monitor regeneration at the appropriate intervals

Steps:

6 33093006-Cut 13.7 6121 - Tamarack High Density Pole 87 Harvest Seed Tree with Tamarack Cmpt. Review Reserves Proposal

<u>Prescription</u> Seed tree harvest; Leave some good quality tamarack or black spruce seed trees throughout the stand and leave the cedar.

Specs:

Other_

This stand is a piece of tamarack broken out from stand 24.

Comments:

Next Monitor the regeneration at the appropriate intervals.

Steps:

13 33093013-Cut 2.6 6128 - Lowland High Density Pole 87 Harvest Clearcut with Lowland Coniferous, Cmpt. Review Reserves Mixed Deciduous Proposal

Deciduous

<u>Prescription</u> Final harvest; Leave some spruce and tamarack for seed source. Possible leave some red maple on top of the heavier regenerating areas of

Specs: balsam fir. Leave the cedar.

Other This stand is a small patch of timber but could be cut with stand 13.

Comments:

Monitor the regeneration status at appropriate intervals

Next Steps:

14 33093014-Cut 20.5 4110 - Sugar Maple High Density Pole 75 Harvest Single Tree Selection Sugar Maple Cmpt. Review Association Proposal

<u>Prescription</u> Selection harvest; Harvest to approximately 70 BA and create regeneration gaps. Favor to retain some minor component species.

Specs:

Other Last harvest was in 1995. The BA is variable from 90-120. Lot of seeding under 3 feet.

Comments:

Next Monitor regeneration at the appropriate intervals.

Steps:

28 33093028-Cut 53.9 4110 - Sugar Maple High Density Pole 75 Harvest Single Tree Selection Sugar Maple Cmpt. Review Association Proposal

<u>Prescription</u> Selection harvest; Harvest to around 70 BA creating regeneration gaps and opening up around existing regeneration.

Specs:

Other North end is high to balsam fir under mix of sugar maple and red maple. Variable BA throughout fluctuating from 70-130. This stand was cut Comments: last in 1995 under the Bourdeau creek sale.

Comments. Tast in 1995 under the Bourdeau creek sale.

Next Monitor regeneration at the appropriate intervals. Steps:

Escanaba Mgt. Unit Data updated before 10:00 AM Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 093 Year of Entry 2012

t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
35	33093035-Cut	12.9	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	85	Harvest	Shelterwood	Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal

Prescription Shelterwood harvest; Leave the cedar, leave some red maple or sugar maple where M or F regeneration exists.

Specs:

s

Other species; black cherry, yellow birch. Mixed stand with pockets of red maple/sugar maple to cedar/black ash. Other_

Comments:

Monitor regeneration at the appropriate intervals. <u>Next</u>

Steps:

33093061-Cut 69.2 61 4119 - Mixed High Density Log 75 Harvest Single Tree Selection Mixed Northern Cmpt. Review Northern Hardwoods Hardwoods Proposal

Prescription Selection harvest; Harvest down to approximately 70 BA and create regeneration gaps throughout. In the lower areas with balsam fir

regeneration open up more to 40-50 BA. Specs:

Other_ Mix of sugar maple and red maple; other species include hemlock, black spruce, ironwood, white spruce. See on the photo the pockets of areas that are dominated by sugar maple and sugar maple regeneration.

Comments: Monitor the regeneration at the appropriate intervals.

<u>Next</u> Steps:

Total Treatment

175.3 Acreage Proposed:



Table 2 – Proposed Treatment Summaries

Data updated before 10:00 AM

Escanaba Mgt. Unit Year of Entry 2012

Compartment 093
Total Compartment Acres: 1640

Acres by Treatment Type

Commercial Harvest - 196 Site Prep - 0 Tree Planting - 0 Prescribed Burn - 0 Other - 0

Habitat Cut - 0 Opening Maintenance - 0 Tree Seeding - 0 Pesticide - 0

Cover Type by Harvest Method

			Cov	er ıyı	be by r	arves	st wetr	ioa	
		/ (175 OF	10 S	100 K	Sie de la constant de	St. Ost.		S. A. S.
Aspen	·	2	0	0	0	0	0	2	
Lowland Conifers	5	3	0	0	0	0	0	3	
Lowland Deciduo	ous	0	0	0	13	0	0	13	
Northern Hardwo	od	0	151	0	0	0	0	151	
Tamarack		0	0	27	0	0	0	27	
	Total	5	151	27	13	0	0	196	

Data updated before 10:00 AM

Compartment 093 Year of Entry 2012



Age Class

							90	Oluss									
	No.	40.00	8.7	0,0	,		AD. P.	\$ /	89.00	10 ¹ /2°	\$. S	,	00,00	ST. 7.0	SO* Ju	8 / 25 / 25	les /
Aspen	0	0	8	158	13	89	0	0	2	0	0	0	0	0	0	269	
Cedar	0	0	0	0	0	0	0	0	0	21	0	64	216	249	0	549	
Herbaceous Openland	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	
Lowland Aspen/Balsam Poplar	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	
Lowland Conifers	0	0	0	0	0	0	38	0	74	3	0	29	0	0	0	143	
Lowland Deciduous	0	0	0	0	0	0	60	0	20	39	0	0	0	0	0	119	
Lowland Shrub	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	
Marsh	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
Mixed Upland Deciduous	0	0	0	7	0	0	0	0	2	0	0	0	0	0	0	9	
Northern Hardwood	0	0	0	0	0	0	0	0	306	66	0	0	0	0	0	371	
Paper Birch	0	0	10	0	2	0	0	0	0	0	0	0	0	0	0	12	
Tamarack	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0	27	
Upland Mixed Forest	0	0	31	0	0	0	0	5	0	0	0	0	0	0	0	36	
Water	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	
Total	99	0	49	170	15	89	99	5	403	155	0	92	216	249	0	1640	

Escanaba Mgt. Unit Compar





8 – 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	Туре	Data updated before 10:00 AM Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen of stocked trout populations and those of other coldwater fish superar to year. Coldwater streams in Michigan typically provide contributions of groundwater to their stream flows. Such stream designated as trout resources by Fisheries Order 210.	species (e.g., slimy sculpin) to persist from e these conditions due to substantial