

# TRAVERSE CITY FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT #165 ENTRY YEAR: 2012

Compartment Acreage: 1787 County: Kalkaska

Stand Examiner: Michael Lesinski

Legal Description: T27N, R8W, Sections 16-19.

Management Goals: Mixed use.

Soil and Topography: Soils range from Rubicon Sand to Kalkaska Loamy Sand. The topography is rolling

hills.

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

The ownership in and around compartment is primarily State-owned land. In section 16 there are some privately owned lots. One is known as The Peninsula and is bounded on the west, south and east by Island Lake and on the north by Island Lake Road and is one acre in size. The other is a series of lots located in W1/2W1/2SESW. Some of these lots are privately owned and some are owned by the State. This was coded as private property because there is more acreage of private (.9) than state (.8). This compartment has an excellent mixture of timber types and a wide variety of recreational opportunities. Sand Lakes Quiet Area is located on adjacent State lands to the south. Some of this compartment was hit with a windstorm in 1998, and the affected stands were susequently treated with salvage harvests.

Unique, Natural Features (include only non-site specific and non-sensitive information): None listed on the Natural Features Inventory.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): Two Late Woodland Camps listed in the Archeological Site Listing.

**Special Management Designations or Considerations:** The compartment holds a few stands that border the Sand Lakes Quiet area.

#### **Watershed and Fisheries Considerations:**

#### Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of an end moraine of coarse textured till and glacial outwash sand & gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Coldwater Shale. There is no current economic use for the Coldwater Shale. The nearest gravel pits are within one mile to the north. Gravel potential in the compartment is considered good. This area is located along the northern edge of the Silurian Niagaran reef trend. Part of the State land is currently leased for oil and gas development and there may be additional reef potential. Part of the Compartment has been nominated for underground gas storage and Section 18 has been nominated for the May 2010 lease auction. The Antrim Shale has not been developed in this area, but may have some future potential.

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**Vehicle Access:** The compartment is bordered to the south by Island Lake Road, and is split nearly in half by Dockery Road. The Boardman Valley Snowmobile trail passes east to west through the compartment, which provides nearly year-round access to a large portion of the compartment. Additionally, there are many "two track" type roads that provide access for both public and land management activities.

**Survey Needs:** There are no known survey needs in this compartment.

**Recreational Facilities and Opportunities:** Boardman Valley Snowmobile Trail crosses east to west through compartment. It is groomed and maintained by the Grand Traverse Snowmobile Club. The Riding-Hiking Trail is located in Section 16 and runs northerly.

**Fire Protection:** VFD Fire Protection is from the Kalkaska Fire Dept., and DNRE protection is from the Kalkaska Field Office. The south half of Section 19 falls within Zone 6 which means on a Very High or Extreme day additional DNRE equipment from several stations will also respond to the fire. Travel time from the Kalkaska Field Office is good, access is not a problem here. Urban Innerface is not a concern, although Guernsey Lake State Forest Campground as well as dispersed camping occurs in this compartment.

#### **Additional Compartment Information:** None.

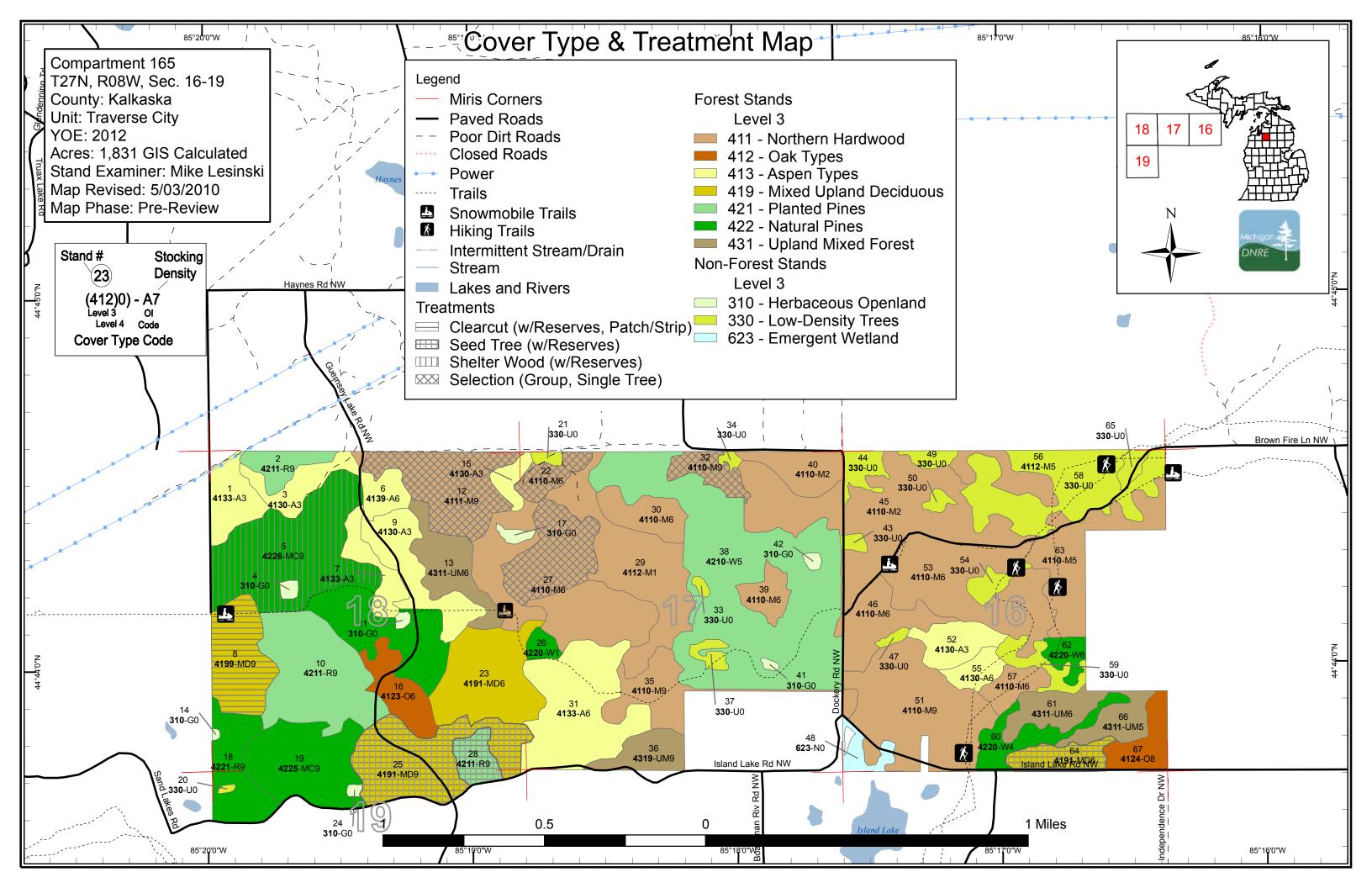
\*\*\*\* Cover type details, proposed treatments and stands designated as FDF are listed in the attached reports:

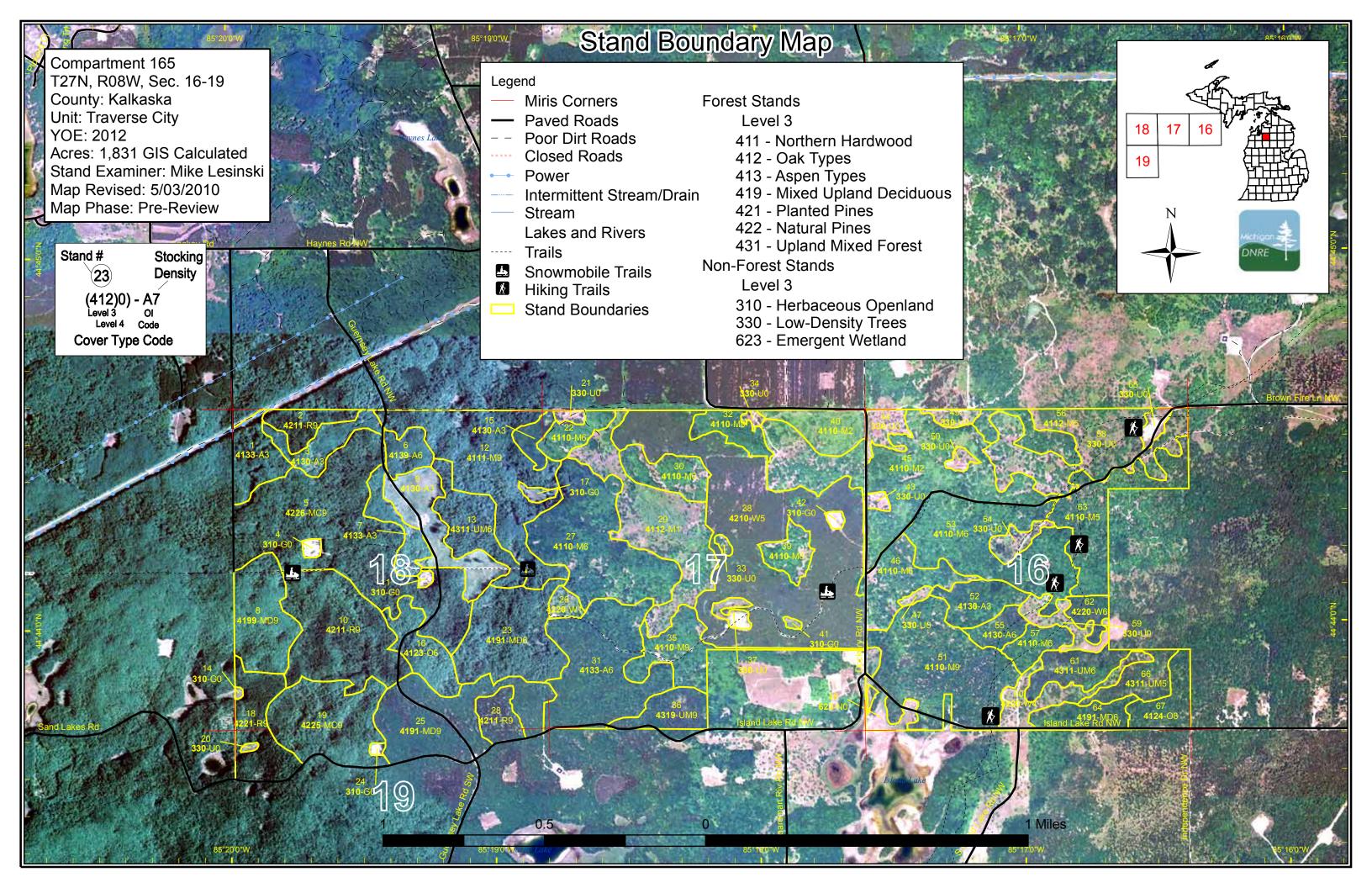
Cover Type by Age Class Cover Type by Management Objective Compartment Volume Summary Proposed Treatments – No Limiting Factors Proposed Treatments – With Limiting Factors

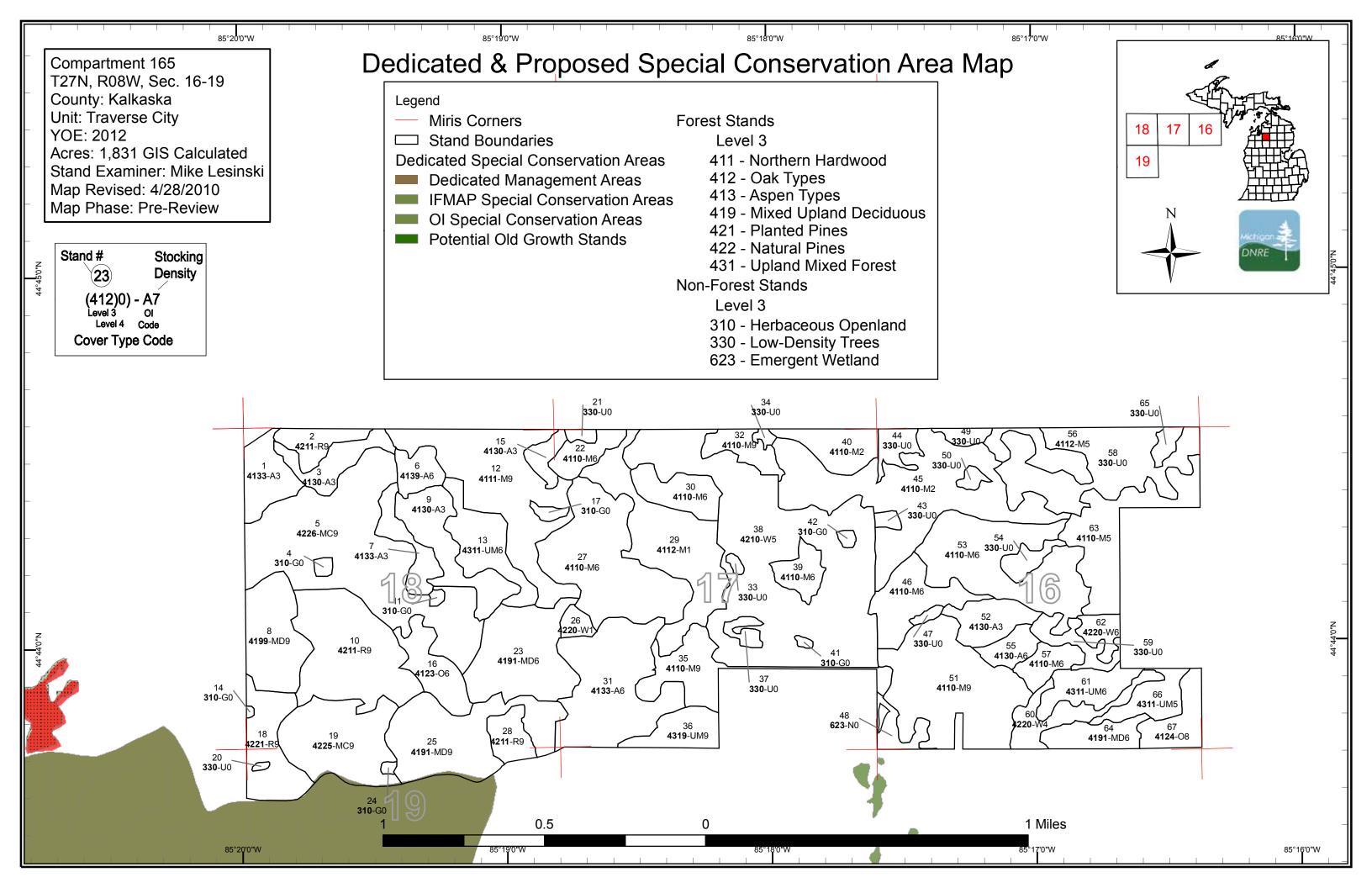
\*\*\*\* The following information is displayed on the attached compartment maps:

Base feature information, stand numbers, cover types Proposed treatments Proposed road access system Suggested potential old growth

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(Level 3 Cover Type)

Compartment 165 Year of Entry 2012



Age Class																	
	Hon	O Signary Company	\$2/	70,73	,	, S. J.	D. P.	\$ . S	80.00	, or	\$ 6	86.00	00,00	87.70	, 0° / 31°		, p <sup>2</sup>
Aspen Types	0	50	51	18	78	0	0	0	0	0	0	0	0	0	0	198	
Emergent Wetland	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Herbaceous Openland	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
Low-Density Trees	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	
Mixed Upland Deciduous	0	0	0	0	0	16	0	52	96	0	0	0	0	0	0	164	
Natural Pines	0	0	19	0	0	8	30	5	126	0	0	0	0	0	50	238	
Northern Hardwood	0	61	118	28	0	97	74	267	0	0	0	0	0	0	14	658	[
Oak Types	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	38	[
Planted Pines	0	0	0	0	0	172	66	25	0	0	0	0	0	0	0	262	1
Upland Mixed Forest	0	0	0	28	19	0	16	0	17	0	0	0	0	0	0	79	1
Total	137	111	188	74	97	293	186	348	277	0	0	0	0	0	64	1775	]



# **Table 2 – Proposed Treatment Summaries**

Traverse City Mgt. Unit

Compartment 165
Year of Entry 2012

Total Compartment Acres: 1775

# **Acres by Treatment Type**

Commercial Harvest - 316 Site Prep - 0 Tree Planting - 0 Prescribed Burn - 13 Other - 1

Habitat Cut - 0 Opening Maintenance - 15 Tree Seeding - 0 Pesticide - 0

#### **Cover Type by Harvest Method**

	Cover Type by Harvest Metricu									
		/	**************************************	10 10 S	No.	Normood /	or Other Park		So. So.	
Mixed Upland De	ciduous	37	0	75	0	0	0	112		
Natural Mixed Pines		0	0	0	82	0	0	82		
Northern Hardwood		0	111	0	0	0	0	111		
Red Pine		0	0	12	0	0	0	12		
	Total	37	111	87	82	0	0	316		

Compartment: 165 Traverse City Mgt. Unit Table 3 -- Treatments Prescribed with No Limiting Factor Year of Entry 2012 s t а **Treatment** Acres Stage1 Size Stand **Treatment Treatment** Cover Type n **Approval** Name CoverType Method Objective d Density Age Type Status 5 61165005-Cut 81.9 42260 - Natural High Density Log 76 Harvest Shelterwood Natural White Pine, Cmpt. Review Pine, Mixed Mixed Deciduous Proposal Deciduous Prescription Expand aspen clones where applicable. 50% reduction in BA in areas that are heavy to pine and oak. Create oak regeneration openings throughout. Remove cull trees and overmature logs first. Retention: Residual stand BA. Specs: Other\_ Comments: <u>Next</u> Steps: 8 61165008-Cut 36 6 4199 - Other Mixed High Density Log 78 Harvest Clearcut with Aspen, Mixed Pine Cmpt. Review **Upland Deciduous** Reserves Proposal Prescription Final harvest. Leave approximately 10 BA of mixed oak for seed source and retention. Specs: Other\_ Create some (approximately 1 tree per 2 acres) coarse woody debris (CWD) during harvest operations, preferably via timber sale specs. CWD trees should be log sized or bigger, the more decay resistant the tree species is the better, and cut approximately at breast height (4.5 feet). The Comments: log should be left within 3 feet it's stump. Next Steps: 12 61165012-Cut 48.7 4111 - S.Maple, High Density Log Single Tree Selection Cmpt. Review 69 Harvest Sugar Maple Hard Mast Association Proposal Association Prescription Reduce BA to approximately 70 in areas of mixed hardwood. Remove overmature and cull trees first. Expand aspen clones where applicable. Create regeneration openings throughout. Retention: Residual stand BA. Specs: <u>Other</u> Harvest will be limited by topography. Favor areas that are flat enough to be commercially harvested. Harvested acreage may differ from Comments: treatment acreage due to steep ridges. Next Steps: 22 61165022-Cut 11.6 4110 - Sugar Maple High Density Pole 45 Harvest Single Tree Selection Sugar Maple Cmpt. Review Association Association Proposal Prescription TSI. Remove culls and poor formed trees. Target residual BA of 60 to 90 square feet. Retention: Residual stand BA. Specs: Other Comments: **Next** Steps: Oak, Pine High Density Log 25 61165025-Cut 59.3 4191 - Mixed 73 Harvest Seed Tree with Cmpt. Review **Upland Deciduous** Reserves Proposal with Conifer Prescription Leave approximately 20 BA oak and pine mix. Expand aspen clones. Cut all red maple. Create multiple regeneration openings. Retention: Residual oak and pine BA. Specs: Other Comments:

Next Steps:

Compartment: 165 Traverse City Mgt. Unit Table 3 -- Treatments Prescribed with No Limiting Factor Year of Entry 2012 s t **Treatment** Acres Stage1 Size Stand **Treatment Treatment** Cover Type Approval n Method Objective Name CoverType Density Status d Age Type 27 61165027-Cut 38.0 4110 - Sugar Maple High Density Pole 56 Harvest Single Tree Selection Sugar Maple Cmpt. Review Association Association Proposal Prescription Remove culls and poor formed trees. Target residual BA of 60 to 90 square feet. Expand aspen clones where applicable. Retention: Residual Specs: stand BA. Other Harvest to follow topography. A few areas may be too steep to harvest. Comments: <u>Next</u> Steps: 61165028-Cut 11.8 42110 - Planted High Density Log Harvest Seed Tree with Planted Red Pine, Cmpt. Review Red Pine Reserves Mixed Deciduous Proposal Prescription Target residual BA of 20 to 40 square feet. Leave a mix of oak and pine where applicable. Create regeneration openings throughout. Retention: Residual stand BA. Specs: Other Comments: <u>Next</u> Steps: 61165032-Cut 12.6 4110 - Sugar Maple High Density Log Single Tree Selection Sugar Maple Cmpt. Review Harvest Association Association Proposal Prescription TSI. Remove culls and poor formed trees. Target residual BA of 60 to 90 square feet. Retention: residual stand BA Specs: Other Comments:

**Next** Steps:

> 64 61165064-Cut 15.8 4191 - Mixed High Density Pole 45 Harvest Seed Tree with Aspen, Mixed Pine Cmpt. Review Upland Deciduous Reserves Proposal with Conifer

Prescription Expand aspen clones where applicable. In oak and pine areas, target a residual BA of 10 to 20 square feet. Create regeneration openings

Specs: throughout. Retention: oak and pine resdiual.

Create some (approximately 1 tree per 2 acres) coarse woody debris (CWD) during harvest operations, preferably via timber sale specs. CWD Other . Comments: trees should be log sized or bigger, the more decay resistant the tree species is the better, and cut approximately at breast height (4.5 feet). The log should be left within 3 feet it's stump.

<u>Next</u> Steps:

**Total Treatment** 

Acreage Proposed:

316.3

Traverse City Mgt. Unit Table 4 -- Treatments Prescribed with Compartment: 165 a Limiting Factor s Year of Entry 2012 t **Treatment Treatment Treatment Cover Type** n Acres Stage1 Size Stand **Approval** CoverType Method Objective Status Name Density Age Type

Prescription

Specs:

Other Comment:

Next Steps:

<u>Limiting Factor and No</u> <u>Treatment Reason</u>

> Total Treatment Acreage Proposed:

0

s t	Traverse City Mgt. Unit				ested Sta Method: IFI	Michigan
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4133 - Aspen, Mixed Pine	High Density Sapling	19.8	15	51-80	Aspen regen with pockets of oak and mixed hardwood.
2	42110 - Planted Red Pine	High Density Log	12.7	69	111-140	Canopy is about 75% closed. Red pine still has room for canopy growth. This stand is nearing the end of merchantability due to its size (diameter is close to outgrowing local markets).
3	4130 - Aspen	High Density Sapling	16.6	17	51-80	17 year old aspen regen with some scattered white pine and mixed hardwood. Stand is fully stocked.
5	42260 - Natural Pine, Mixed Deciduous	High Density Log	126.0	76	171-200	Heavily mixed stand. Some small areas within the stand will be difficult to harvest due to topography.
6	4139 - Aspen, Mixed Deciduous	High Density Pole	11.2	23	51-80	Aspen and maple regen. Not ready for further management.
7	4133 - Aspen, Mixed Pine	High Density Sapling	14.6	15	1-50	Aspen regen.
8	4199 - Other Mixed Upland Deciduous	High Density Log	36.6	78	171-200	Stand should be clear cut. Resulting regeneration would be heavy to aspen, with some maple, oak, and pine. Good site. Stand should regen well.
9	4130 - Aspen	High Density Sapling	32.0	5		Recent clear cut. Aspen is regenerating nicely.
10	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	65.8	59	81-110	Split stand to form stand 66. Treat stand 12 next rotation.
12	4111 - S.Maple, Hard Mast Association	High Density Log	76.0	69	111-140	Log sized sugar maple and mixed hardwood. Stand has fairly steep ground with some high hardwood ridges. There are some pockets of declining bigtooth aspen.
13	4311 - Pine, Aspen Mix	High Density Pole	27.6	26	81-110	Aspen and white pine mix. Not ready for harvest at this point.
15	4130 - Aspen	High Density Sapling	7.3	25	51-80	Fully stocked aspen regen. No management needed at this time.
16	4123 - Red Oak	High Density Pole	20.9	76	81-110	Mixed oak and pine stand. Poorer quality site.
18	42210 - Natural Red Pine	High Density Log	30.1	59	171-200	Overmature aspen, dense red pine, some steeper topography, but stand is workable overall.
19	42250 - Pine, Oak	High Density Log	49.9	Uneven Age	141-170	Well stocked Red Pine and Oak. May want to break part of this stand out, and include in a timber sale with stand #66.
22	4110 - Sugar Maple Association	High Density Pole	11.6	45	81-110	Small sugar maple pole stand. Could benefit from TSI. Could be combined with thinning planned for stand 11.

S t	Traverse City Mgt. Unit				orested Sta	Mehidan
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	52.0	65	81-110	Stand is mostly a mix of oak and pine with some patches of poor quality aspen.
25	4191 - Mixed Upland Deciduous with Conifer	High Density Log	59.3	73	141-170	Pockets of aspen and red pine with oak intermixed. Aspen is in decline. Some areas are heavy to a white pine understory.
26	42200 - Natural White Pine	Low Density Sapling	5.1	62		Cut to seedtree after 1998 tornado. Stand is converting to red maple and beech with some scattered pine.
27	4110 - Sugar Maple Association	High Density Pole	74.1	56	81-110	Stand is mainly pole sized sugar maple. Some scattered sugar maple logs. Declining aspen found in pockets. Verry small amount of scattered red oak.
28	42110 - Planted Red Pine	High Density Log	11.8	68	141-170	Red pine plantation. Nearing end of rotation.
29	4112 - Maple, Beech, Cherry Association	Low Density Sapling	61.0	7		Primarily a hardwood stand. Final harvest last YOE. Some scattered white pine.
30	4110 - Sugar Maple Association	High Density Pole	18.7	42	81-110	Pole sugar maple stand. Small stand. Fairly steep. Limited commercial appeal.
31	4133 - Aspen, Mixed Pine	High Density Pole	68.4	35	51-80	Mixed stand. Not ready for harvest at this point.
32	4110 - Sugar Maple Association	High Density Log	12.6	67	111-140	
35	4110 - Sugar Maple Association	High Density Log	29.0	66	81-110	
36	4319 - Mixed Upland Forest	High Density Log	17.0	73	111-140	Steep. Terrain is a limiting factor to harvest.
38	42100 - Planted White Pine	Medium Density Pole	172.0	48	141-170	Row thinned last YOE. 50% volume removal. Canopy has not closed yet.
39	4110 - Sugar Maple Association	High Density Pole	11.6	47	81-110	Mainly sugar maple poles with some larger oaks. Not ready for commercial thinning.
40	4110 - Sugar Maple Association	Medium Density	18.9	10		Final harvest ten years ago. There were a few sugar maple reserves left in stand (less than 10 BA).
45	4110 - Sugar Maple Association	Medium Density	99.3	12		Salvage cut following tornado in 1998.
46	4110 - Sugar Maple Association	High Density Pole	27.6	26	141-170	Pole stand. Not ready for commercial thinning.
51	4110 - Sugar Maple Association	High Density Log	79.4	66	111-140	High quality sugar maple stand. Thinned last YOE, canopy still has some gaps. Thin again in 10 years.

S t	Traverse City Mgt. Unit				ested Sta	Western 3
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
52	4130 - Aspen	High Density Sapling	18.1	4		Recently CC.
53	4110 - Sugar Maple Association	High Density Pole	69.6	64	51-80	Mixed pole stand. Not ready for commercial thinning.
55	4130 - Aspen	High Density Pole	9.9	38	51-80	Narrow band of aspen and mixed hardwood. Not ready for final harvest.
56	4112 - Maple, Beech, Cherry Association	Medium Density Pole	13.9	Uneven Age	51-80	Stand is a narrow band along adjoining harvest. Most of stand is sidehill that would be equipment limited.
57	4110 - Sugar Maple Association	High Density Pole	11.5	47	81-110	Poorer quality hardwoods. Pole stand. Small diameters make this stand not viable for commercial thinning.
60	42200 - Natural White Pine	Low Density Pole	18.9	18		Changed from non forested to forested. Scattered clumps of white pine and black cherry with grass openings between.
61	4311 - Pine, Aspen Mix	High Density Pole	18.8	31		Poorer quality aspen site.
62	42200 - Natural White Pine	High Density Pole	8.4	49	81-110	Mix of white pine logs and poles. Thinned following last YOE.  Very little understory.
63	4110 - Sugar Maple Association	Medium Density Pole	43.5	42		Lower quality mixed hardwood stand. Approximately 75% canopy closure. Thinned following last YOE. Horse trail passes through stand.
64	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	15.8	45	81-110	Mixed stand, pine and hardwood. Some pockets of aspen. Borderline on harvestability.
66	4311 - Pine, Aspen Mix	Medium Density Pole	15.6	50	1-50	Fairly poor site. Mixed aspen and pine. A few small openings in stand.
67	4124 - Red with White Oak	Medium Density Log	17.2	73	51-80	Fairly open stand (approximately 70% canopy closure). Not ready to treat.

Traverse City Mgt. Unit

# 6 - Nonforested Stands Inventory Method: IFMAP

Compartment: 165 Year of Entry: 2012



Stand	Cover Type	Acres	Gen Cmts:
4	3105 - Mixed Upland Herbaceous	1.9	
11	3303 - Mixed Low Density Trees	1.3	
14	3105 - Mixed Upland Herbaceous	0.5	
17	3105 - Mixed Upland Herbaceous	2.6	
20	3302 - Low Density Conifer Trees	0.7	
21	3303 - Mixed Low Density Trees	2.3	
24	3105 - Mixed Upland Herbaceous	1.0	
33	3303 - Mixed Low Density Trees	1.4	
34	3303 - Mixed Low Density Trees	1.7	
37	3303 - Mixed Low Density Trees	4.7	
41	3105 - Mixed Upland Herbaceous	1.0	
42	3105 - Mixed Upland Herbaceous	1.6	
43	3303 - Mixed Low Density Trees	2.5	
44	3303 - Mixed Low Density Trees	8.5	
47	3303 - Mixed Low Density Trees	2.0	
48	6232 - Wet Prairie	8.3	
49	3303 - Mixed Low Density Trees	4.6	Scattered white pine and cherry.
50	3301 - Low Density Deciduous Tree	2.8	

Traverse City Mgt. Unit

# 6 - Nonforested Stands Inventory Method: IFMAP

Compartment: 165 Year of Entry: 2012



Stand	Cover Type	Acres	Gen Cmts:
54	3303 - Mixed Low Density Trees	7.3	
58	3303 - Mixed Low Density Trees	64.2	White pine and mixed aspen in grass openings. Cherry, beech and sugar maple saplings along edges of stand.
59	330 - Low-Density Trees	11.4	
65	3303 - Mixed Low Density Trees	4.5	

Traverse City Mgt. Unit Compartment: 165

Year of Entry: 2012

# Michigan DNRE

#### 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.

**Inventory Method: IFMAP** 

Stand	SCA Type	SCA Name	Acres	Comments

Traverse City Mgt. Unit

Compartment: 165 Year of Entry 2012



#### 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	n Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
HCVA	Dedicated Management Areas	Such areas are dedicated by the DNR Director for specific manarules, as governed by Part 5, Department of Natural Resources, 324.504). Section 38 of the Administrative Procedures Act (MCL the promulgation of rules. This is an active program, with one proDNR.	of the NREPA (MCL 324.502(2) and 24.238) provides for public requests for
SCA	Potential Old Growth Areas	This category contains stands were identified for a broad range of database as stand condition 8 as potential old growth (POG). A identified through the Operations Inventory (OI)/Compartment Re Entry 2008 and forward, potential old growth is managed for the through the Biodiversity Conservation Planning Process (BCPP) objective (as an ERA, HCVA, or other type of SCA) and is releas designation; or 2) it is released from the potential old growth desprocess.	Approximately 310,000 acres have been eview process. For stands in Year of identified objective until it is: 1) vetted and given a specific designation and sed from the potential old growth