



**TRAVERSE CITY FOREST MANAGEMENT UNIT  
COMPARTMENT REVIEW PRESENTATION**

**COMPARTMENT # 005    ENTRY YEAR: 2013**

**Compartment Acreage: 1899    County: Benzie**

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**Stand Examiner:** Timothy Webb

**Legal Description:** T27N - R14W - Sections 2, 11, 14

**Management Goals:** Compartment 5 was previously managed under the Pere Marquette State Forest Plan as Resource Management Unit 107, designated for intensive timber management. Past emphasis was on promotion of higher quality northern hardwood stands and pine plantations, and conversion of poorer quality hardwoods to aspen where possible.

There are numerous conifer plantations of various species scattered throughout the compartment. Red and white pine plantations are growing well and should be maintained with periodic thinnings. Blocks of white spruce with mixed hardwoods are providing habitat diversity. Jack pine, Scotch pine, Austrian pine, and Douglas fir should be considered for removal and conversion to red or white pine, hardwoods, or oak. One jack pine stand has already been mostly removed and underplanted with red oak.

While there are a few better-than-average quality hardwood stands in the compartment, most are of medium to poor quality and are at risk of significant insect damage and subsequent tree species loss. Emerald ash borer is already present, and beech bark disease, though not yet detected in the compartment, is imminent. Previous clearcuts in mixed hardwood-aspen stands have resulted in reasonably well-stocked aspen and cherry regeneration, with small amounts of other hardwoods. Given the low quality and the insect risk, additional patches of mature hardwoods can be clearcut and regenerated to mixed aspen/hardwoods where aspen is present, or perhaps converted to pine where aspen is currently scarce. Medium to high quality hardwood stands should be maintained with periodic thinnings.

Many of the forest openings are in frost-prone depressions and are self maintaining. Other openings on old homesteads and fields should be maintained for wildlife habitat diversity.

In the YOE 2010 review for adjacent compartment 8, a 1997 proposed old growth area covering parts of compartments 4, 5, 8, 9 and 10 was revisited. Based on inventory data, land type associations, access, topography, current cover types, ownership, and MNFI data, a suggested revision of this area was drafted for incremental nomination as a Special Conservation Area as each compartment comes up for review. Thus, a portion of compartment 5 is being forwarded for possible inclusion in this SCA, to be managed for remote, mature, late-successional forest.

**Soil and Topography:** Most of the compartment is level to rolling with some kettle depressions, small wetlands and draws. A significant slope break and parallel valley run roughly north/south through parts of sections 2 and 11. Soils are predominantly Benzonia and Kaleva sand types.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** Three private parcels lie within the compartment boundaries, the largest being 80 acres with a permanent residence. The other two are recreational properties, one with a cabin in trespass on adjacent state land. Ownership within a mile in all

directions is mainly state land with the exception of the southwest corner which contains private forested parcels within 1/2 mile of the compartment boundary.

**Unique, Natural Features:** Pigeon Lake is in section 14, mostly on private land.

**Archeological, Historical, and Cultural Features:** There is evidence of old homesteads in the northeast and northwest corners of section 2. An old, abandoned rail grade runs roughly north-south through the west half of sections 2 and 11.

**Special Management Designations or Considerations:** Approximately the south  $\frac{3}{4}$  of the east  $\frac{1}{2}$  of section 14 is being proposed as a special conservation area. This area was a proposed old growth area in previous planning cycles.

**Watershed and Fisheries Considerations:** There are no water features in the compartment other than Pigeon Lake - a small, shallow pond on private land - and a few small wetlands in kettle depressions.

**Wildlife Habitat Considerations:** State land in this compartment is situated predominately on glacial outwash plains of dry sandy soils. Wildfires were a common phenomenon on these dry soils and represent an important natural disturbance. These fires created and sustained a variety of fire driven communities; however parts of this landscape were at times shielded from fire to a degree. Consequently, some management for successional advanced hardwood/white pine stands is fitting to this compartment. Hardwood treatments should be designed to incorporate the preservation of tree species diversity, the retention of mature mast producing trees, and the protection of den, cavity, and downed trees. Tops should be left onsite, unchipped, and in scattered piles for habitat. Many wildlife species, including broad-winged hawks, wild turkeys, southern flying squirrels, eastern gray squirrels, and Baltimore orioles, are associated with these forest types.

This compartment also has a history of aspen cutting. Such early successional management is appropriate and should be continued in this area, with additional aspen harvests scheduled this inventory cycle in order to increase age class diversity. The incorporation of snags, leave trees, brush piles, and downed logs in these cuts will help to replicate a wildfire-altered forest and increase wildlife use by species like grouse, woodcock, golden-winged warbler, and deer.

Future management of the several pine stands here should consider incorporating small (2-5 acre) islands that are left relatively un-thinned within mature stands to provide winter roosting cover for turkeys.

Openings are an important part of this dry and fire prone landscape. Opening maintenance will continue in the compartment to benefit grassland species and species utilizing the edge component of these openings, such as, cedar waxwing, deer, wild turkey, mourning dove, meadow vole, or red fox.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and coarse-textured glacial till. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift is the Devonian Traverse Group. The Traverse is used for stone and cement. The nearest gravel pit is three miles away but there should be some gravel potential in the compartment. This area is located northwest of the Antrim Shale gas play. The Antrim Shale appears to be pinched out and there appears to be limited potential.

**Vehicle Access:** Access is adequate through most of the compartment. Logging trucks may have difficulty in parts of section 14 because of terrain. However, much of this section may be incorporated into a special conservation area where logging may be limited.

**Survey Needs:** None.

**Recreational Facilities and Opportunities:** The Platte River Snowmobile Trail passes through sections 2 and 11. Garey Lake State Forest Campground is within one mile to the east of the compartment as is the Pearl Lake area. The area is popular for deer and grouse hunting. Non-hunting use consists of berry and mushroom picking.

**Fire Protection:** Fire protection response for this area will come out of the Platte River DNR Office with assistance provided by Homestead Township Volunteer Fire Department. Additional DNR resources will respond from the Traverse City Field Office as needed. Road access in the area is fair which allows for good response times. Good access to water points for fire suppression are readily available within a few miles. Wildfire history in the area has been relatively low. (Comments made by Rod Rader, Fire Supervisor, Traverse City Field Office).

**Additional Compartment Information:** The trespass cabin in the NW ¼ SE ¼ of section 14 remains an unresolved issue.

**\*\*\*\* Cover type details and proposed treatments are listed in the attached reports:**

**Cover Type by Age Class**

**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 SCAs**

# Cover Type & Treatment Map

Compartment 5  
 T27N, R14W, Sec. 2, 11, 14  
 County: Benzie  
 Unit: Traverse City  
 YOE: 2013  
 Acres: 1,899 GIS Calculated  
 Stand Examiner: Tim Webb  
 Map Revised: 5/23/2011  
 Map Phase: Pre-Review

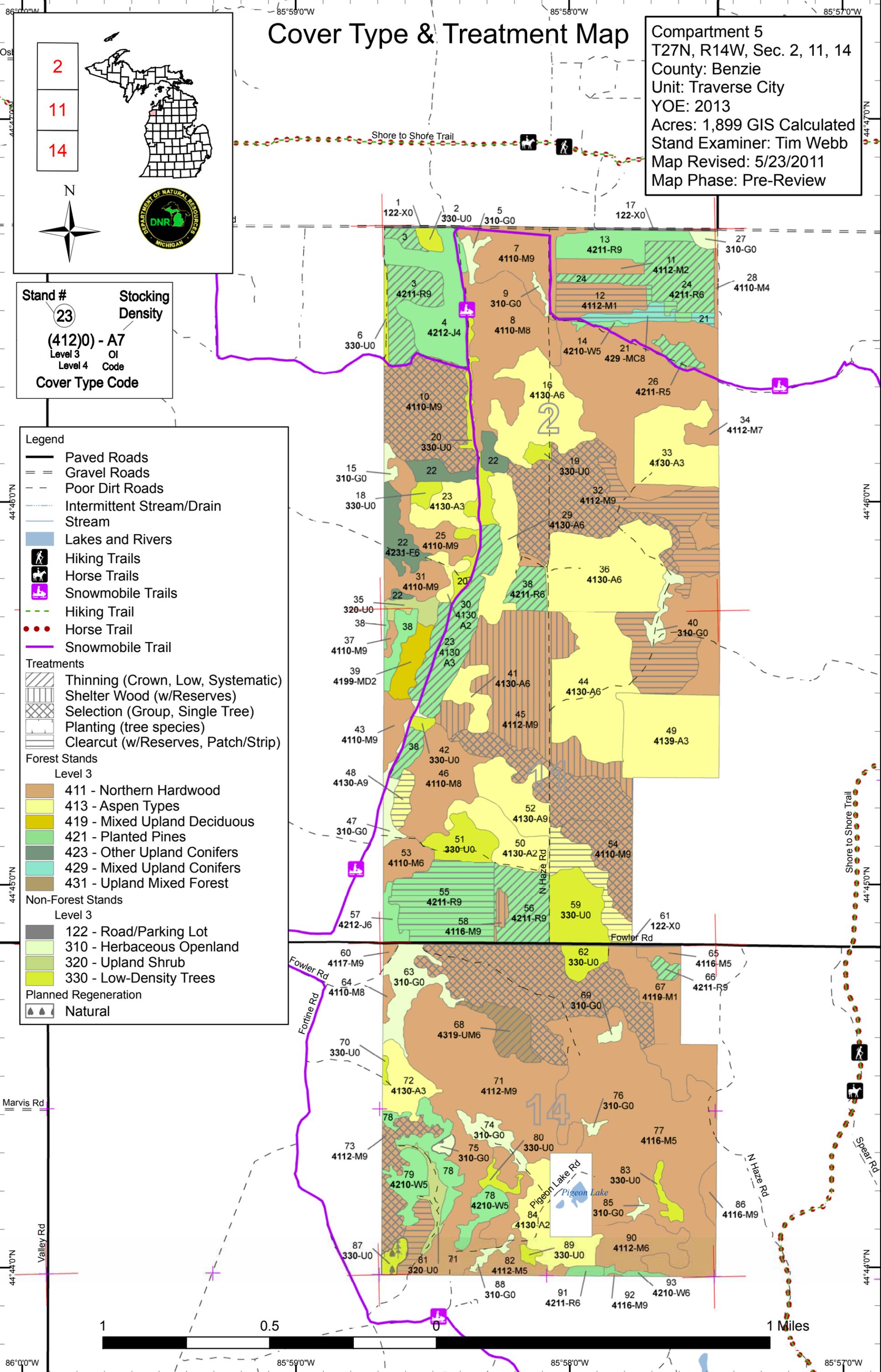
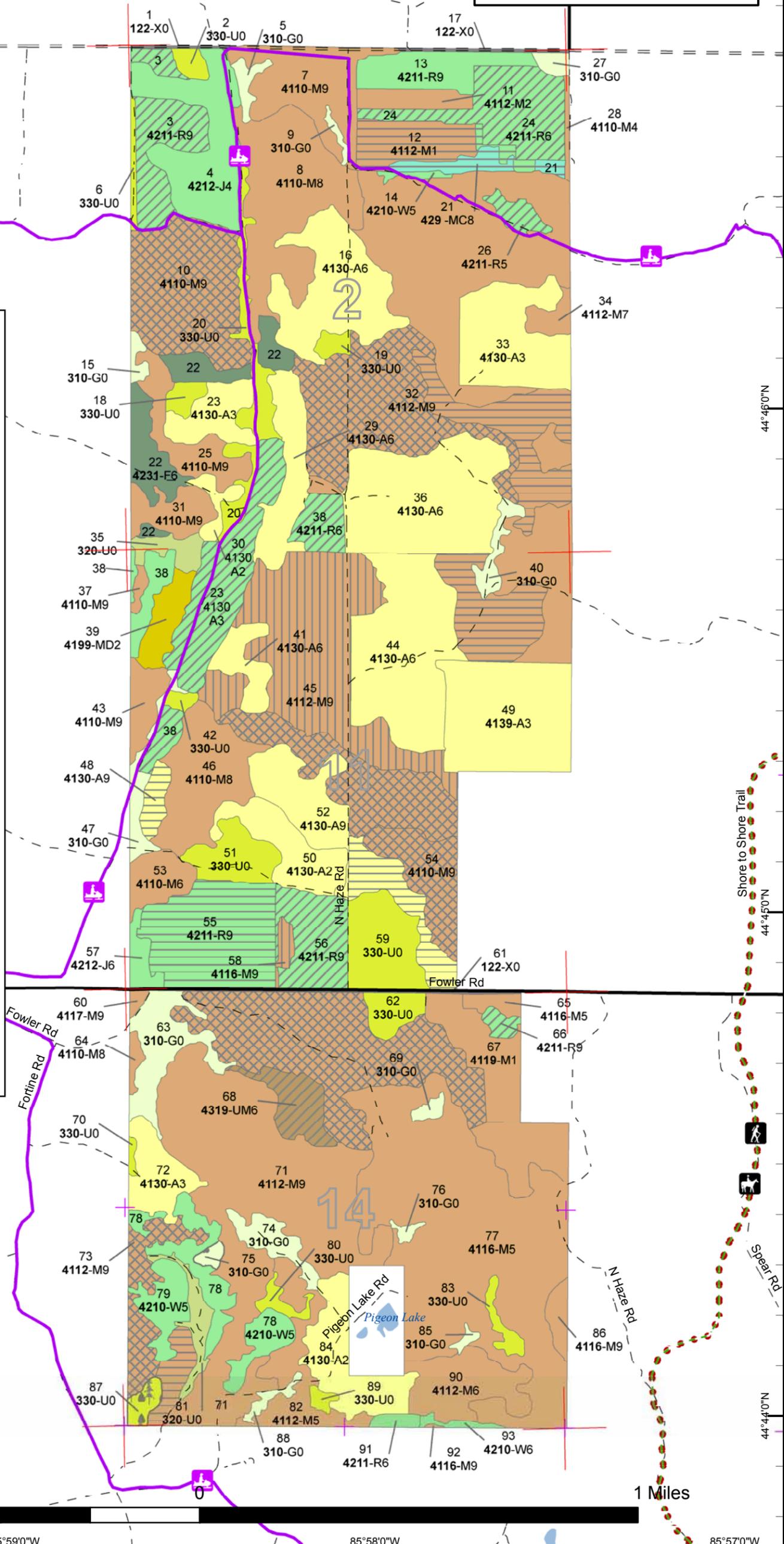
2  
 11  
 14



Stand #  
 23  
 (412)0 - A7  
 Level 3  
 Level 4  
 Stocking Density  
 OI  
 Code  
 Cover Type Code

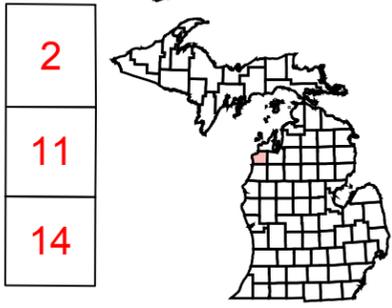
### Legend

- Paved Roads
  - Gravel Roads
  - Poor Dirt Roads
  - Intermittent Stream/Drain
  - Stream
  - Lakes and Rivers
  - Hiking Trails
  - Horse Trails
  - Snowmobile Trails
  - Hiking Trail
  - Horse Trail
  - Snowmobile Trail
- Treatments
- Thinning (Crown, Low, Systematic)
  - Shelter Wood (w/Reserves)
  - Selection (Group, Single Tree)
  - Planting (tree species)
  - Clearcut (w/Reserves, Patch/Strip)
- Forest Stands  
 Level 3
- 411 - Northern Hardwood
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 423 - Other Upland Conifers
  - 429 - Mixed Upland Conifers
  - 431 - Upland Mixed Forest
- Non-Forest Stands  
 Level 3
- 122 - Road/Parking Lot
  - 310 - Herbaceous Openland
  - 320 - Upland Shrub
  - 330 - Low-Density Trees
- Planned Regeneration
- Natural



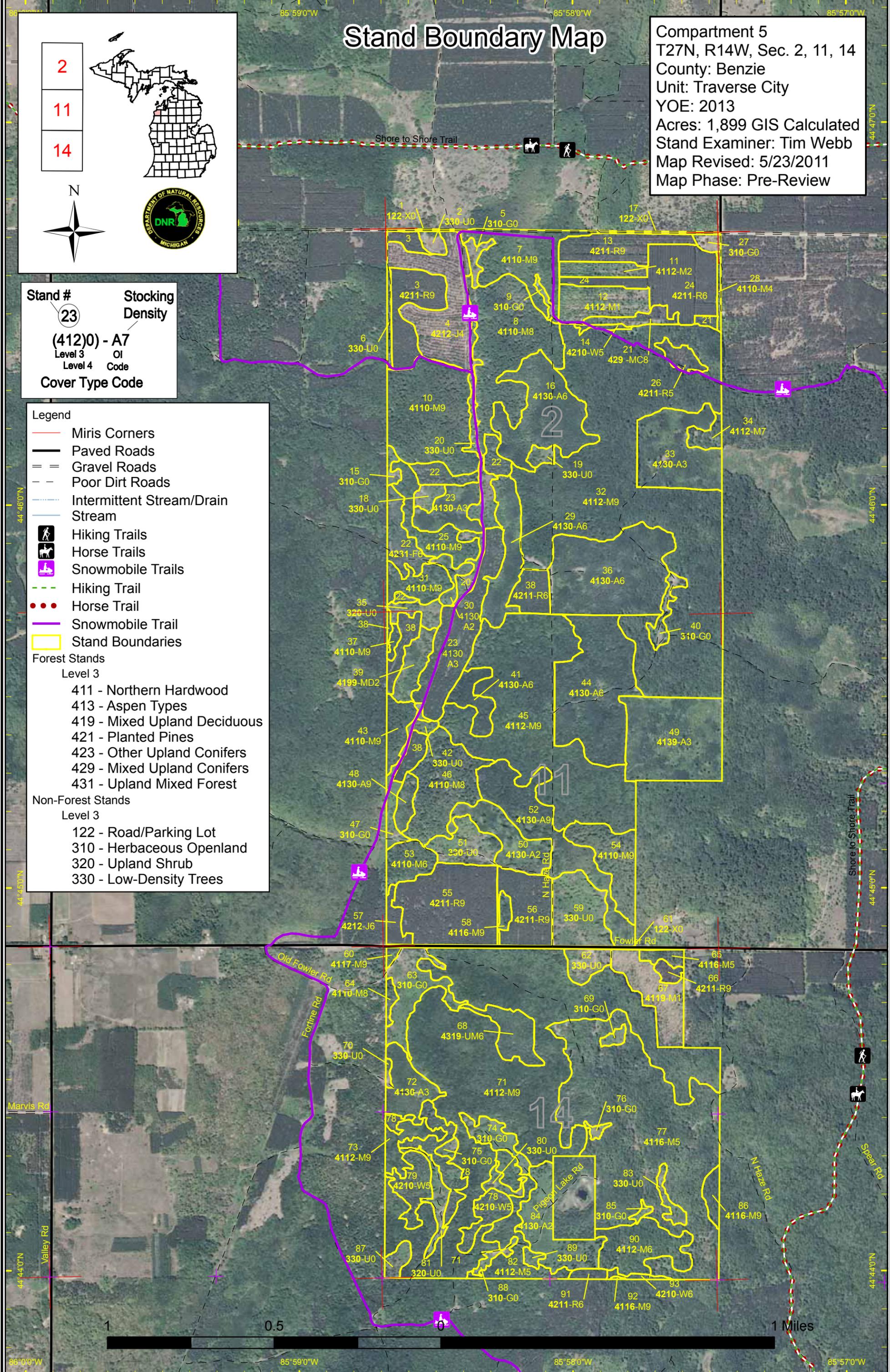
# Stand Boundary Map

Compartment 5  
 T27N, R14W, Sec. 2, 11, 14  
 County: Benzie  
 Unit: Traverse City  
 YOE: 2013  
 Acres: 1,899 GIS Calculated  
 Stand Examiner: Tim Webb  
 Map Revised: 5/23/2011  
 Map Phase: Pre-Review



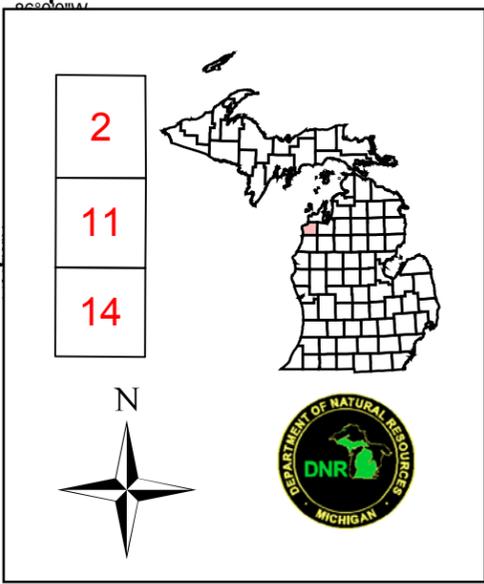
**Stand #**  
 23  
**(4120) - A7**  
 Level 3 OI  
 Level 4 Code  
**Cover Type Code**

- Legend**
- Miris Corners
  - Paved Roads
  - Gravel Roads
  - - Poor Dirt Roads
  - Intermittent Stream/Drain
  - Stream
  - Hiking Trails
  - Horse Trails
  - Snowmobile Trails
  - - - Hiking Trail
  - Horse Trail
  - Snowmobile Trail
  - Stand Boundaries
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
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- Level 3
- 122 - Road/Parking Lot
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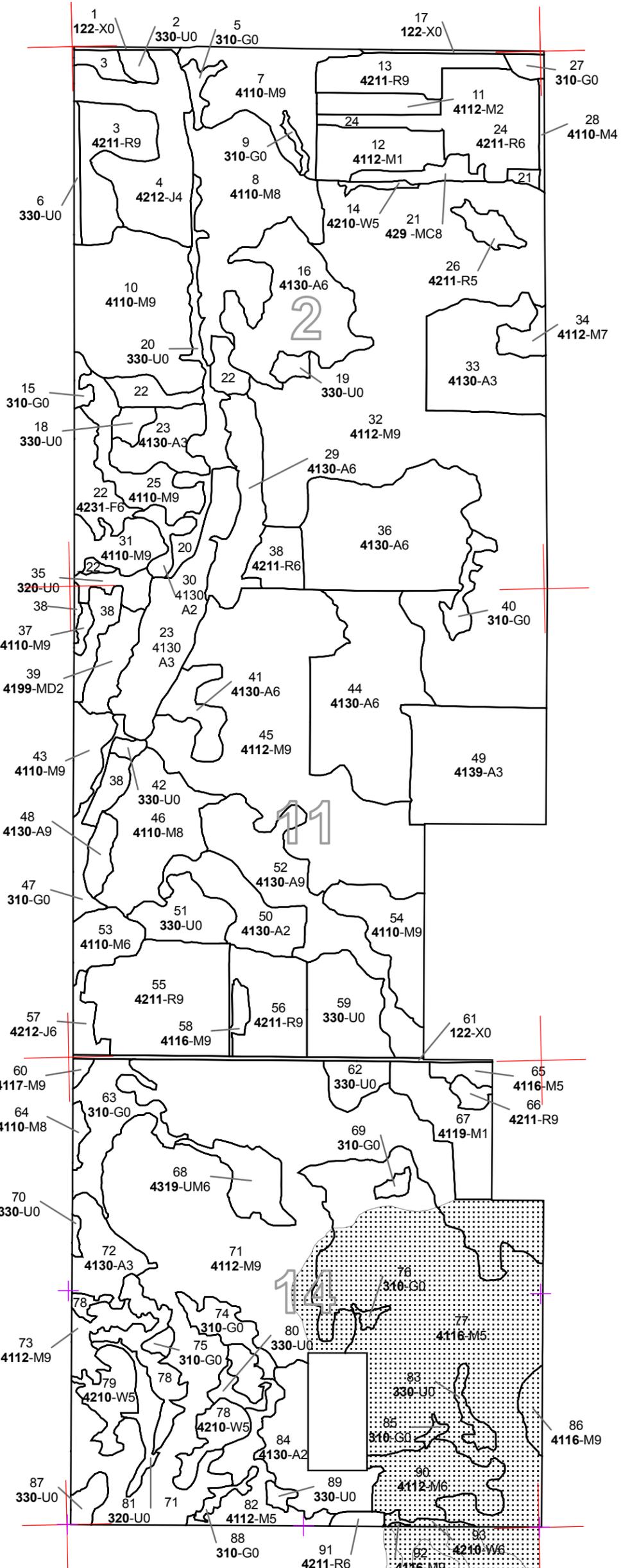
# Dedicated & Proposed Special Conservation Area Map

Compartment 5  
T27N, R14W, Sec. 2, 11, 14  
County: Benzie  
Unit: Traverse City  
YOE: 2013  
Acres: 1,899 GIS Calculated  
Stand Examiner: Tim Webb  
Map Revised: 5/23/2011  
Map Phase: Pre-Review



**Stand #**  
23  
**Stocking Density**  
(412)0 - A7  
Level 3 OI  
Level 4 Code  
**Cover Type Code**

- Legend**
- Miris Corners
  - Proposed Special Conservation Areas
  - ▨ SCA - Special Conservation Area
  - ▭ Stand Boundaries
  - Forest Stands
    - Level 3
    - 411 - Northern Hardwood
    - 413 - Aspen Types
    - 419 - Mixed Upland Deciduous
    - 421 - Planted Pines
    - 423 - Other Upland Conifers
    - 429 - Mixed Upland Conifers
    - 431 - Upland Mixed Forest
  - Non-Forest Stands
    - Level 3
    - 122 - Road/Parking Lot
    - 310 - Herbaceous Openland
    - 320 - Upland Shrub
    - 330 - Low-Density Trees



86°0'0"W 85°59'0"W 85°58'0"W 85°57'0"W

44°45'0"N  
44°44'0"N

44°47'0"N  
44°46'0"N  
44°45'0"N  
44°44'0"N

**Table 1 – Total Acres by Cover Type and Age Class**



	Age Class														Total	
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Unretn Age
Aspen	0	42	97	126	0	101	5	0	0	0	0	0	0	0	0	371
Herbaceous Openland	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
Jack Pine	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	40
Low-Density Trees	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83
Mixed Upland Deciduous	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	9
Northern Hardwood	0	0	24	0	23	145	0	26	11	112	358	309	0	0	38	1046
Red Pine	0	0	0	0	0	54	112	32	0	0	0	0	0	0	0	198
Upland Conifers	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7
Upland Mixed Forest	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	12
Upland Shrub	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Upland Spruce/Fir	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	23
Urban	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
White Pine	0	0	0	0	0	33	3	0	0	0	0	0	0	0	0	36
<b>Total</b>	<b>157</b>	<b>42</b>	<b>121</b>	<b>126</b>	<b>55</b>	<b>345</b>	<b>160</b>	<b>65</b>	<b>11</b>	<b>112</b>	<b>358</b>	<b>309</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>1899</b>



## Table 2 – Proposed Treatment Summaries

**Traverse City Mgt. Unit**  
**Year of Entry 2013**

**Compartment 005**  
**Total Compartment Acres: 1899**

### Acres by Treatment Type

Commercial Harvest - 616	Site Prep - 0	Tree Planting - 4	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

### Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
<b>Aspen</b>	21	0	0	0	0	0	21
<b>Northern Hardwood</b>	86	250	0	79	0	0	414
<b>Red Pine</b>	42	0	0	0	127	0	169
<b>Upland Mixed Forest</b>	0	0	0	0	12	0	12
<b>Total</b>	<b>149</b>	<b>250</b>	<b>0</b>	<b>79</b>	<b>139</b>	<b>0</b>	<b>616</b>



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	61005003-Cut	22.5	42110 - Planted Red Pine	High Density Log	55	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Mark for thinning to a residual BA of about 120. Leave species other than red pine as much as possible for retention. South end of stand abuts the snowmobile trail, so use contract specs as needed to protect the trail.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None.</p>									
24	61005024-thin	29.9	42110 - Planted Red Pine	High Density Pole	63	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Mark for thinning, reducing to a residual BA of about 120-130. Some entire rows may need to be marked due to erratic spacing within the plantation.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Part of the stand is prescribed for a clearcutting, but if that operation is not feasible, thin that part along with the rest of this stand.</p> <p><u>Next Steps:</u> None.</p>									
26	61005026-Cut	4.6	42110 - Planted Red Pine	Medium Density Pole	54	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Mark for thinning to a residual BA of about 120. Use contract specifications to protect the snowmobile trail adjacent to the stand.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None.</p>									
32	61005032-clearcut	52.0	4112 - Maple, Beech, Cherry Association	High Density Log	104	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut to a 2" diameter limit, retaining about 5% canopy cover of mixed hardwoods in small patches.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None needed. Site should regenerate adequately with aspen, cherry, and other hardwood seedlings and sprouts, although beech may dominate initially as occurred in nearby past regeneration harvests.</p>									
32	61005032-thin	55.9	4112 - Maple, Beech, Cherry Association	High Density Log	104	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
<p><u>Prescription</u> Thin to a residual BA of about 80-90. Use Compleat Marker guidelines. Retain some mature beech for mast. Thin heavier where overmature beech are concentrated.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None.</p>									
38	61005038-Cut	46.2	42110 - Planted Red Pine	High Density Pole	42	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Third-row thin; residual BA should be about 130. Also harvest aspen clones/inclusions along with the pine. Retain other species as much as possible for diversity.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None.</p>									



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
45	<b>61005045-shelterwood</b>	76.2	4112 - Maple, Beech, Cherry Association	High Density Log	87	Harvest	Shelter Wood with Reserves	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
<p><u>Prescription</u> Cut to a residual BA of about 30-60, focusing harvest on overmature beech and lower quality trees. Retain some better quality sugar maple as a seed source and some scattered beech and cherry for mast/wildlife trees. Cut all aspen to promote regeneration. Some beech cull logs should be left on site for coarse woody debris.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Conduct regeneration checks at appropriate intervals post-harvest. Mixed hardwood seedlings and sprouts are desirable regeneration, plus aspen sprouting around the few existing clones, although beech may dominate initially. Nearby regeneration cuts in past entry periods have successfully regenerated to aspen, cherry and other hardwoods after initial dominance by beech.</p>									
45	<b>61005045-thin</b>	35.8	4112 - Maple, Beech, Cherry Association	High Density Log	87	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
<p><u>Prescription</u> Cut to a residual BA of about 80-90. Follow Compleat Marker guidelines. Retain some beech and cherry for mast.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None.</p>									
48	<b>61005048-Cut</b>	5.1	4130 - Aspen	High Density Log	52	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut to a 2" diameter limit. Retain some individual/clumps of hardwoods, +/- 5% cover. Create some CWD for drumming logs during harvest. Use contract specs appropriate to protect adjacent snowmobile trail.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None. Site should regenerate adequately with aspen sprouts. Some hardwood seedlings and stump sprouts are also likely and desirable.</p>									
52	<b>61005052-Cut</b>	15.7	4130 - Aspen	High Density Log	45	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut to a 2" diameter limit. Mark scattered hardwoods for retention, +/- 5% residual cover.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None. Site should regenerate adequately with aspen sprouts. Some hardwood seedlings and stump sprouts are also likely and acceptable complements to the aspen regeneration.</p>									
54	<b>61005054-Cut</b>	19.6	4110 - Sugar Maple Association	High Density Log	101	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<p><u>Prescription</u> Mark for selection with a residual BA of 80-90. Create some CWD during harvest. Retain scattered cherry and beech for mast.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None.</p>									



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
55	61005055-Cut	42.5	42110 - Planted Red Pine	High Density Log	58	Harvest	Patch or Strip Clearcut	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Cut and remove all jack pine; thin red pine, removing about 1/3 of the trees, focussing removal on low quality and multi-stemmed trees. Consider snow-free season harvesting to scarify soil in clearcut strips for natural red pine regeneration.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Stand has red pine with intermittent strips of jack pine of varying width.</p> <p><u>Next Steps:</u> Check regeneration in clearcut JP strips at appropriate intervals. A mix of JP/RP regeneration is anticipated. If regeneration is inadequate, consider trenching and planting RP. Alternatively, wait till surrounding RP is mature, then clearcut and replant the entire site at one time, leaving the current clearcut strips unstocked for local habitat diversity.</p>									
56	61005056-Cut	20.7	42110 - Planted Red Pine	High Density Log	55	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Mark for thinning to a residual BA of about 120. Retain scattered cherry as much as possible for diversity.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None.</p>									
58	61005058-Cut	2.4	4116 - Mixed N. Hardwood - Aspen	High Density Log	95	Harvest	Shelter Wood with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription:</u> Mark 30-50 feet of better quality hardwoods and some wildlife trees to leave and cut the rest, allowing stand to regenerate to mixed aspen/hardwood. Create some CWD during harvest operations.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None needed. Stand should regenerate with a mix of aspen root sprouts, hardwood seedlings and stump sprouts, and perhaps some red pine seedlings. Any mix of these species is acceptable.</p>									
66	61005066-Cut	2.7	42110 - Planted Red Pine	High Density Log	56	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Mark for thinning to a residual BA of about 120.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Small area; might need to attach this sale to a nearby hardwood thinning.</p> <p><u>Next Steps:</u> None.</p>									
68	61005068-Cut	12.2	4319 - Mixed Upland Forest	High Density Pole	47	Harvest	Low Thinning	4319 - Mixed Upland Forest	Cmpt. Review Proposal
<p><u>Prescription:</u> Mark for a thinning/improvement cut, targeting poorer quality trees of all species for removal.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> None.</p>									

**Table 3 -- Treatments Prescribed  
with No Limiting Factor**



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
71	<b>61005071- clearcut</b>	7.5	4112 - Maple, Beech, Cherry Association	High Density Log	98	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription: Clearcut to a 2" diameter limit. Mark some hardwoods for retention. Create some CWD during harvest operations.

Specs:

Other Comments: Exact boundary, acreage between this clearcut and the adjacent thinning in the same stand may vary from the prescribed area, depending on the abundance of standing aspen as observed during field layout of the sale boundary.

Next Steps: None. Site should regenerate adequately with aspen sprouts. Some hardwood seedlings and stump sprouts are also likely and acceptable complements to the aspen regeneration.

71	<b>61005071-thin</b>	82.5	4112 - Maple, Beech, Cherry Association	High Density Log	98	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
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Prescription: Mark for thinning, with a residual BA of about 80-90. Create some CWD. Create some regeneration holes. Retain scattered cherry and beech for mast.

Other Comments:

Next Steps: None. A mix of hardwood seedlings and stump sprouts is desirable in regeneration holes, although ironwood and beech may dominate in the short run.

73	<b>61005073-Cut</b>	8.1	4112 - Maple, Beech, Cherry Association	High Density Log	98	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
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Prescription: Mark for thinning, with a residual BA of about 80-90. Create some CWD. Create some regeneration holes. Retain scattered cherry and beech for mast.

Other Comments:

Next Steps: None. A mix of hardwood seedlings and stump sprouts is desirable in regeneration holes, although ironwood and beech may dominate in the short run.

87	<b>NF_61005087- plant</b>	3.7	Non-Forested		0	Tree Planting	Hand Plant	42310 - Planted Spruce	Cmpt. Review Proposal
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Prescription: Plant white spruce seedlings. Hand scalping may be adequate at the time of planting; alternatively, mechanically create planting furrows prior to planting.

Other Comments: This site was a poor quality white pine plantation harvested in 2007 with expected aspen regeneration, which was found inadequate. Site may be a cold air sink. White spruce is prescribed for planting, but red or white pine are acceptable alternatives or supplements.

Next Steps: Conduct a regeneration check at an appropriate interval after planting.

**Total Treatment  
Acreage Proposed: 545.6**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
<b>10 61005010-Cut</b>	48.2	4110 - Sugar Maple Association	High Density Log	90	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<p><u>Prescription</u> Mark for thinning to a residual 80-90 BA; create some regen holes and CWD. Avoid dense hemlock patches during harvest. Use contract specs as necessary to protect the adjacent snowmobile trail.</p> <p><u>Other Comment:</u></p> <p><u>Next Steps:</u> None. Mixed hardwood regeneration is desirable in regeneration holes, although ironwood is likely to dominate in the short term.</p> <p><u>Limiting Factor and No Treatment Reason</u> 3B: T &amp; E or special concern (name) Stick nest found along west side of stand. If occupied by a listed species, it may negate harvesting some or all of the stand.</p>								

<b>12 61005012-Cut</b>	26.0	4112 - Maple, Beech, Cherry Association	Low Density Sapling	13	Harvest	Clearcut	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut all trees &gt;1" dbh regardless of merchantability, specifying chip harvest. No retention is planned, either for residual trees or woody biomass, although scattered, older native hardwoods could be marked for retention if available and if they would not interfere with aerial herbicide application if it is needed.</p> <p><u>Other Comment:</u> This treatment area is a combination of several stands, but is mostly a poorly regenerated former Austrian pine plantation which is dominated by thick, brushy beech saplings. The intention is to clear the site entirely and replant to red pine, which is quite productive in adjacent plantations. Marketability is questionable, but may be operable for a biomass harvest. If this operation is not feasible, maintain the portion of the treatment that is currently mature red pine plantation and thin along with the rest of the plantation.</p> <p><u>Next Steps:</u> May need burning or roller chopping after harvest, depending on the amount of slash and residual trees; then trench and replant to red pine. Herbicide application may be needed to control beech regeneration.</p> <p><u>Limiting Factor and No Treatment Reason</u> 4A: No market for species/product Much of the treatment area is covered by thick, immature beech which needs to be removed to facilitate planting, may not be marketable.</p>								

**Total Treatment Acreage Proposed: 74.3**

Stand	Traverse City Mgt. Unit			5 – Forested Stands		Compartment: 005	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
3	42110 - Planted Red Pine	High Density Log	22.5	55	171-200		Scattered hardwoods and old apple trees; beech, sugar maple, and cherry seedlings and saplings, thick in some spots.
4	42120 - Planted Jack Pine	Low Density Pole	34.9	56			Understory saplings include beech, black cherry, and a few maple.
7	4110 - Sugar Maple Association	High Density Log	29.9	94	81-110		Scattered overstory red maple, basswood, ironwood, and ash.
8	4110 - Sugar Maple Association	Medium Density Log	51.3	104	81-110		
10	4110 - Sugar Maple Association	High Density Log	48.2	90	111-140		Scattered overstory ash, aspen, and hemlock. Understory hemlock is concentrated in the WC part of the stand. Good quality timber along the north and east sides of the stand.
11	4112 - Maple, Beech, Cherry Association	Medium Density	7.5	13	1-50		Scattered remnant apple trees. 2-aged: remnant pole hardwoods over beech/pine dominated regeneration.
12	4112 - Maple, Beech, Cherry Association	Low Density Sapling	16.6	13	1-50		Some scattered Douglas fir and Scotch pine in stand. Remnant mature Austrian pine seed trees are giving way to predominantly beech regeneration, with Austrian pine seedlings, some cherry and maple. Also scattered paper birch, ironwood, and aspen poles.
13	42110 - Planted Red Pine	High Density Log	17.2	59	141-170		North strip along Oviatt Road is hardwood; additional hardwoods in 2 wider E-W lanes within the plantation.
14	42100 - Planted White Pine	Medium Density Pole	1.5	54	141-170		
16	4130 - Aspen	High Density Pole	37.4	25			
21	429 - Mixed Upland Conifers	Medium Density Log	7.1	63	141-170		East block is mostly Scotch pine, middle block is mostly Austrian pine, west finger is mostly Douglas fir poles.
22	42311 - Planted Spruce, Mixed Deciduous	High Density Pole	22.6	35	51-80		
23	4130 - Aspen	High Density Sapling	12.9	13			
24	42110 - Planted Red Pine	High Density Pole	32.2	63	171-200		
25	4110 - Sugar Maple Association	High Density Log	15.3	90	81-110		Numerous multi-stemmed trees, generally low quality. Narrow part of stand between north and south lobes has understory white spruce.
26	42110 - Planted Red Pine	Medium Density Pole	4.6	54	171-200		



Stand	Traverse City Mgt. Unit			5 – Forested Stands		Compartment: 005	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
28	4110 - Sugar Maple Association	Low Density Pole	1.7	Uneven Age	1-50		Hardwood strip between plantation blocks with some big, old sugar maples from old farmstead.
29	4130 - Aspen	High Density Pole	19.8	25			
30	4130 - Aspen	Medium Density	4.2	13			
31	4110 - Sugar Maple Association	High Density Log	10.9	Uneven Age	111-140		Numerous multi-stemmed trees, generally low quality.
32	4112 - Maple, Beech, Cherry Association	High Density Log	228.0	104	111-140		2-3 acre inclusion of planted understory white spruce in the east-central part of the stand. Aspen is old and declining. Beech and ash are at risk.
33	4130 - Aspen	High Density Sapling	33.0	14			
34	4112 - Maple, Beech, Cherry Association	Low Density Log	4.5	Uneven Age	51-80		Poor quality cherry; many multi-stemmed trees. Good sugar maple understory through much of the stand.
36	4130 - Aspen	High Density Pole	54.8	25			Patches of understory spruce are concentrated at the east end of the stand.
37	4110 - Sugar Maple Association	High Density Log	1.6	90	81-110		
38	42110 - Planted Red Pine	High Density Pole	53.5	42	171-200		Somewhat limby, 2-4 stick trees. Snowmobile trail and an old RR grade run through much of the stand.
39	4199 - Other Mixed Upland Deciduous	Medium Density	9.4	32	1-50		Stand has small amounts of elm, balsam poplar, ash, beech, juniper, juneberry.
41	4130 - Aspen	High Density Pole	9.7	48			
43	4110 - Sugar Maple Association	High Density Log	8.3	108	81-110		Good quality hardwoods. Scattered beech and aspen.
44	4130 - Aspen	High Density Pole	54.6	43			
45	4112 - Maple, Beech, Cherry Association	High Density Log	112.0	87	81-110		Stand has scattered white ash, aspen.
46	4110 - Sugar Maple Association	Medium Density Log	30.8	95	81-110		Ground layer is thick in places with raspberry, beech seedlings, or ironwood seedlings. Aspen is in scattered clones.
48	4130 - Aspen	High Density Log	5.1	52	111-140		



Stand	Traverse City Mgt. Unit		5 – Forested Stands			Compartment: 005	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
49	4139 - Aspen, Mixed Deciduous	High Density Sapling	46.5	14			The stand has mixed aspen-cherry regeneration with significant patches of pure cherry cover.
50	4130 - Aspen	Medium Density	18.7	5			Cut in 2006. Small islands of residual hardwoods, scattered old beech.
52	4130 - Aspen	High Density Log	37.2	45			
53	4110 - Sugar Maple Association	High Density Pole	10.0	74	81-110		Heavy layer of ironwood seedlings. Small area with bigtooth aspen in NW corner of stand.
54	4110 - Sugar Maple Association	High Density Log	19.6	101	111-140		Scattered black cherry in stand.
55	42110 - Planted Red Pine	High Density Log	42.5	58	141-170		
56	42110 - Planted Red Pine	High Density Log	20.7	55	141-170		Scattered pole cherry.
57	42120 - Planted Jack Pine	High Density Pole	4.8	59			
58	4116 - Mixed N. Hardwood - Aspen	High Density Log	2.6	95	111-140		Generally low quality, with some better sugar maple.
60	4117 - Mixed N. Hardwood - Pine	High Density Log	1.1	70	51-80		Belt of Scotch pine along road.
64	4110 - Sugar Maple Association	Medium Density Log	2.0	100	81-110		
65	4116 - Mixed N. Hardwood - Aspen	Medium Density Pole	3.4	35	81-110		Part of the stand had Scotch pine removed in 2009. Middle part of stand is aspen, east and west ends mixed hardwoods.
66	42110 - Planted Red Pine	High Density Log	2.7	56	171-200		Small, isolated stand.
67	4119 - Mixed Northern Hardwoods	Low Density Sapling	19.4	35			Described stand is the residual from a 2009 Scotch pine removal. Stand should gradually fill in with additional hardwood seedlings.
68	4319 - Mixed Upland Forest	High Density Pole	12.2	47	141-170		
71	4112 - Maple, Beech, Cherry Association	High Density Log	221.5	98	111-140		EAB is likely present. Sugar maple is more prominent on hill tops, ridges. Aspen is in scattered patches.
72	4130 - Aspen	High Density Sapling	14.1	26			Scattered elm, ironwood in overstory. Most of the hardwood is of stump sprout origin.



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## Traverse City Mgt. Unit

## 5 – Forested Stands

Compartment: 005  
Year of Entry: 2013

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
73	4112 - Maple, Beech, Cherry Association	High Density Log	8.1	98	111-140	Scattered beech, aspen.
77	4116 - Mixed N. Hardwood - Aspen	Medium Density Pole	145.0	45	81-110	Density is quite variable. Scattered white pine and elm in the stand.
78	42100 - Planted White Pine	Medium Density Pole	22.1	47	111-140	Thinned in 2007.
79	42101 - Planted White Pine, Mixed Deciduous	Medium Density Pole	10.6	47	111-140	
82	4112 - Maple, Beech, Cherry Association	Medium Density Pole	20.6	Uneven Age	81-110	Much of the stand is on slopes. Generally low quality hardwoods, but stand has some better quality single- stemmed maples (aged one RM @ 31) in the intermediate canopy. Aspen is in various aged clones, one aged at 53, some mortality.
84	4130 - Aspen	Medium Density	23.0	4		The stand, cut in 2007, has scattered remnant white pine, juneberry, and individuals and patches of residual hardwoods. There are 2 small wetlands within the stand.
86	4116 - Mixed N. Hardwood - Aspen	High Density Log	4.2	68	81-110	
90	4112 - Maple, Beech, Cherry Association	High Density Pole	21.3	68	81-110	
91	42110 - Planted Red Pine	High Density Pole	2.1	51	111-140	Stand data was copied from the larger, contiguous stand to the south in compartment 8.
92	4116 - Mixed N. Hardwood - Aspen	High Density Log	0.2	86	81-110	Stand data was copied from the larger, contiguous stand to the south in compartment 8.
93	42100 - Planted White Pine	High Density Pole	1.7	51	171-200	Stand data was copied from the larger, contiguous stand to the south in compartment 8.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	122 - Road/Parking Lot	1.0	No	Low (NonForested)	Petengill Rd.
2	3303 - Mixed Low Density Trees	2.9	No	Medium (NonForested)	Stand is mostly an open grassy field, with patches of oak/white pine along the road.
5	3102 - Grass	3.1	No	Medium (NonForested)	
6	3301 - Low Density Deciduous Tree	2.5	No	Low (NonForested)	Narrow opening along 2-track between mature hardwoods and pine plantation, succeeding to hardwoods with some pine volunteers.
9	3103 - Rubus-Fern	1.3	No	Medium (NonForested)	Old RR grade runs through opening.
15	3103 - Rubus-Fern	2.0	No	Medium (NonForested)	
17	122 - Road/Parking Lot	1.7	No	Low (NonForested)	Oviatt Road
18	3301 - Low Density Deciduous Tree	3.4	No	Low (NonForested)	
19	3301 - Low Density Deciduous Tree	2.5	N/A	Unspecified	
20	3301 - Low Density Deciduous Tree	16.0	No	Low (NonForested)	
27	3102 - Grass	2.4	Yes	Medium (NonForested)	Stand has an old concord grape vine in a Scotch pine.
35	3204 - Mast Producing Shrub	5.5	No	Medium (NonForested)	
40	3103 - Rubus-Fern	5.1	No	Medium (NonForested)	
42	3301 - Low Density Deciduous Tree	1.6	No	Low (NonForested)	
47	3103 - Rubus-Fern	6.9	No	Medium (NonForested)	
51	3303 - Mixed Low Density Trees	13.3	No	Medium (NonForested)	Mature hardwood inclusion along east edge. Mixed pines include jack and red pine. Mixed deciduous species include sugar maple, cherry, ironwood, ash, basswood, and aspen.
59	3301 - Low Density Deciduous Tree	21.6	No	Medium (NonForested)	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
61	122 - Road/Parking Lot	4.3	No	Low (NonForested)	Fowler Road
62	3301 - Low Density Deciduous Tree	7.0	No	Medium (NonForested)	Hardwoods are slowly reclaiming an old field.
63	3103 - Rubus-Fern	18.0	No	Low (NonForested)	Patches of planted white spruce along edges; belt of red/Scotch pine along road.
69	3103 - Rubus-Fern	1.8	No	Low (NonForested)	
70	3302 - Low Density Conifer Trees	0.9	No	Low (NonForested)	Patches of planted white spruce with ironwood, cherry, maple, and aspen saplings and poles.
74	3103 - Rubus-Fern	8.0	No	Low (NonForested)	
75	3103 - Rubus-Fern	1.6	Natural Regen	Low (NonForested)	This stand is the result of a small clearcut patch associated with a white pine thinning. The lower 1/4 of the stand is regenerating well to aspen; the upper 3/4 has been severely browsed and may not recover.
76	310 - Herbaceous Openland	1.2	No	Low (NonForested)	
80	3301 - Low Density Deciduous Tree	3.0	No	Low (NonForested)	Part of stand is in frost holes.
81	3204 - Mast Producing Shrub	6.6	Yes	Medium (NonForested)	
83	3301 - Low Density Deciduous Tree	3.5	No	Low (NonForested)	
85	3103 - Rubus-Fern	1.0	No	Low (NonForested)	
87	3303 - Mixed Low Density Trees	3.7	Natural Regen	Low (NonForested)	Stand was a poor quality white pine plantation, clearcut in 2007 with expected aspen regeneration. Aspen sprouts are sparse, heavily browsed. Some white pine regeneration slowly coming in.
88	310 - Herbaceous Openland	2.2	No	Low (NonForested)	The stand is mainly in a frost-prone draw.
89	3301 - Low Density Deciduous Tree	1.6	No	Low (NonForested)	



**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.

Stand	SCA Type	SCA Name	Acres	Comments
77	Unique Site - SCA	61005077-SCA	186.0	This area was previously nominated as proposed old growth in 1997. Nomination as an SCA/Biodiversity Stewardship Area is recommended. This area is part of a proposed multi-compartment complex of stands on a moraine landscape which could be managed long-term for late-successional northern hardwoods with conifer elements. Active management might be limited to promoting succession/diversity in plantations, treating exotic pests, or fire suppression. The area includes all or parts of stands 71, 77, 76, 83, 85, 86, 90, 92, and 93 in compartment 5.



### 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.

ERA = Ecological Reference Area  
HCVA = High Conservation Value Area  
SCA = Special Conservation Area

Conservation Area	Type	Description
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