



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

COMPARTMENT # 251 ENTRY YEAR: 2013

Compartment Acreage: 1230 GIS calculated County: Kalkaska

Revision Date: 4/25/2011, 5/23/2011

Stand Examiner: Kelly Standerfer, Forest Management Division ; Steven Griffith Wildlife Division

Legal Description: T25N, R7W, Sec.'s 29, 30, 31 & 32

RMU (if applicable):

Management Goals:

Manage for both vegetative & wildlife diversity while maintaining the high recreation value within this compartment.

Soil and Topography:

Terrain is rolling to very hilly especially along the Manistee River. Mostly Rubicon, Emmet north of the river.

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

Mostly block ownership however there are some in holdings along the river.

Unique, Natural Features (include only non-site specific and non-sensitive information):

None known at this time within the compartment boundary however this area has the potential to provide habitat for many unique plants and animals.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):

There are significant Native American sites in this compartment.

Special Management Designations or Considerations:

The Manistee River flows through this compartment. Consumers Energy has pine reserves in sections 31 & 32.

Watershed and Fisheries Considerations:

The Manistee River, Filer Creek, and Nelson Creek flow through Compartment 251. All three streams are Designated Trout Streams, with populations of brook and brown trout. The Natural Rivers native vegetation buffer for Nelson and Filer Creeks is 50', so no cutting should occur within 50' of either stream and their tributaries. The native vegetation buffer for the Manistee River is 175', so no cutting should occur within 175' of the river. Also, BMPS should be followed when working in wet areas near the streams..

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions:

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and an end moraine of coarse-textured till. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan is quarried for gypsum. The nearest gravel pit is two miles to the west. Gravel potential in the compartment is considered good especially the north edge. The abandoned Cannon Creek Field lies three miles to the east. The field produced over 850,000 mcf gas from the Traverse Limestone. Springfield 32 Field lies to the west. It produced from the Traverse Limestone (? gas) and the PdC (>1.9 Bcf gas and > 228,000 BO). All of the State land, with mineral rights, is currently leased for oil and gas development. There may be potential for oil and gas in this area.

Vehicle Access:

South Manistee River Rd offers access for the areas south of the river and several county roads offer access to the portions north of the river.

Survey Needs:

Existing survey markers should be sufficient for this year of entry treatments.

Recreational Facilities and Opportunities:

The old Smithville State Forest Camp Ground is located in Section 29 north of the river. There has not been any maintenance on the access site location to the Manistee River in many years. The Miss-Kal ORV Trail runs through the lower part of section 31.

A canoe livery is located on private land south side of the river in section 32.

Fire Protection:

Fire protection for this area is handled out of the Kalkaska DNR field office for initial attack. Additional resources are available from the Manton DNR Office as well as units from the local volunteer fire departments. The compartment has fair road access with available water point areas nearby for fire suppression. Travel time to the area is acceptable due to M-66 being a straight shot from the Kalkaska DNR Office. (Comments made by Rod Rader, MDNR Fire Supervisor, Traverse City Field Office).

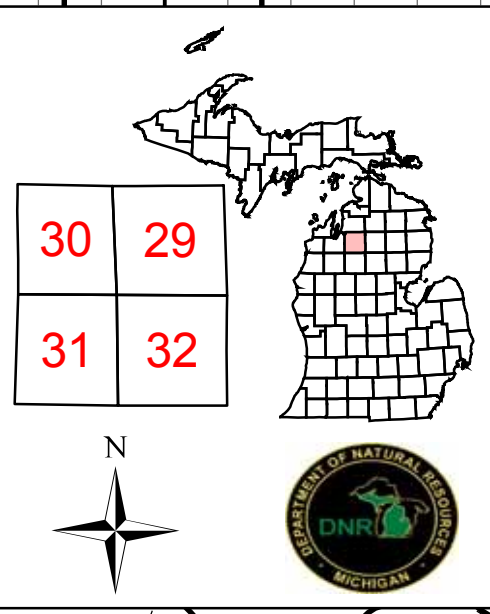
Additional Compartment Information:

All of the land in this compartment has been acquired from Consumers Energy.

Cover Type & Treatment Map

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

Compartment 251
 T25N, R07W, Sec. 29-32
 County: Kalkaska
 Unit: Traverse City
 YOE: 2013
 Acres: 1,283 GIS Calculated
 Stand Examiner: Kelly Standerfer
 Map Revised: 5/25/2011
 Map Phase: Pre-Review



Legend

- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Boat Access Sites
- Canoe Access Sites
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers
- MCCCT Trails
- ORV Routes
- ORV Trails
- Snowmobile Trails
- MCCCT Trail
- ORV Route
- ORV Trail
- Snowmobile Trail

Treatments

- Thinning (Crown, Low, Systematic)
- Shelter Wood (w/Reserves)
- Selection (Group, Single Tree)
- Clearcut (w/Reserves, Patch/Strip)

Forest Stands

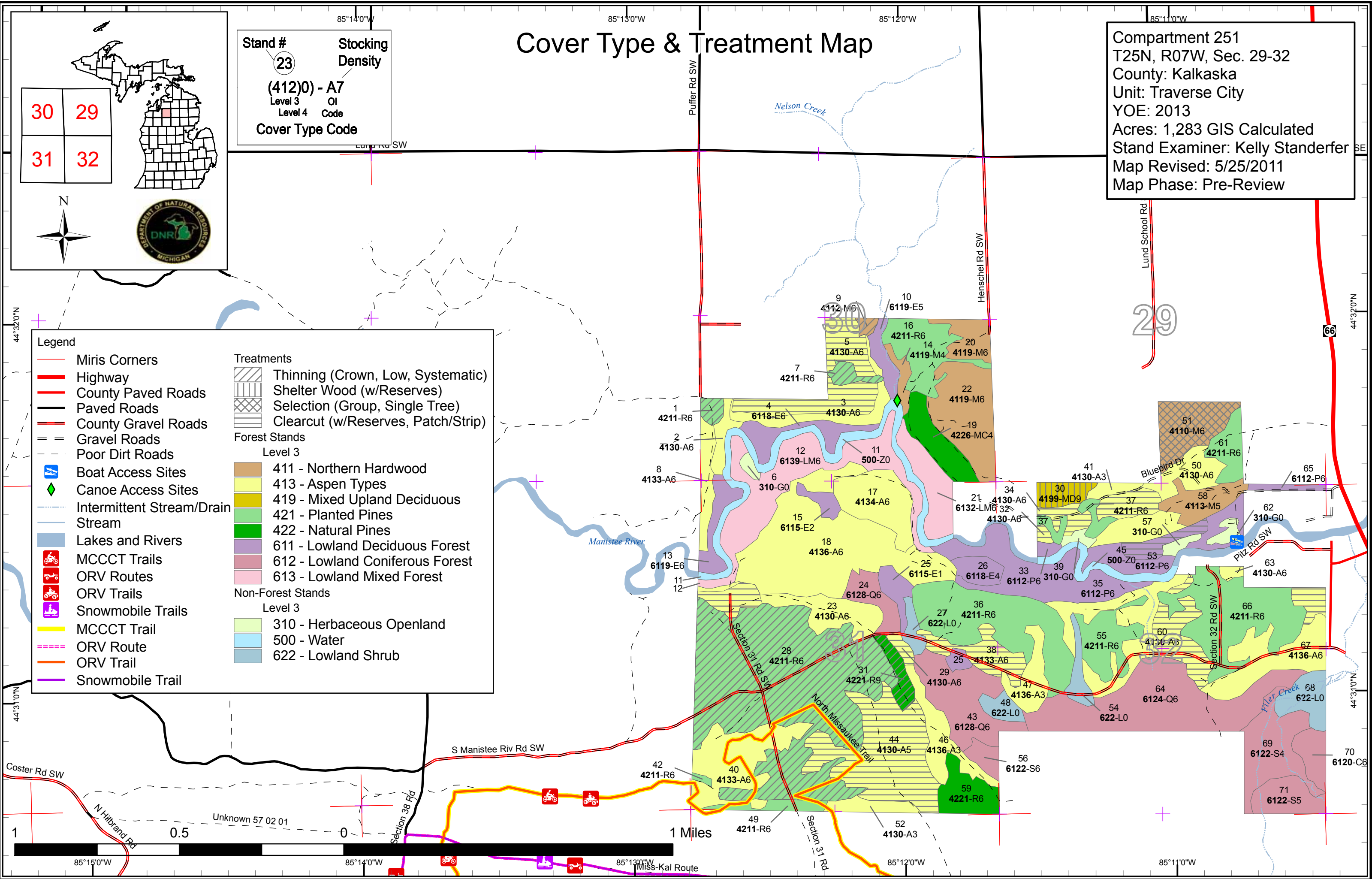
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub



Stand Boundary Map

Compartment 251
 T25N, R07W, Sec. 29-32
 County: Kalkaska
 Unit: Traverse City
 YOE: 2013
 Acres: 1,283 GIS Calculated
 Stand Examiner: Kelly Standerfer
 Map Revised: 5/25/2011
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Stand #
 23
 (412)0) - A7
 Level 3 OI
 Level 4 Code
 Cover Type Code

30	29
31	32



Legend

- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Boat Access Sites
- Canoe Access Sites
- Intermittent Stream/Drain
- Stream
- MCCCT Trails
- ORV Routes
- ORV Trails
- Snowmobile Trails
- MCCCT Trail
- ORV Route
- ORV Trail
- Snowmobile Trail

Stand Boundaries

Forest Stands

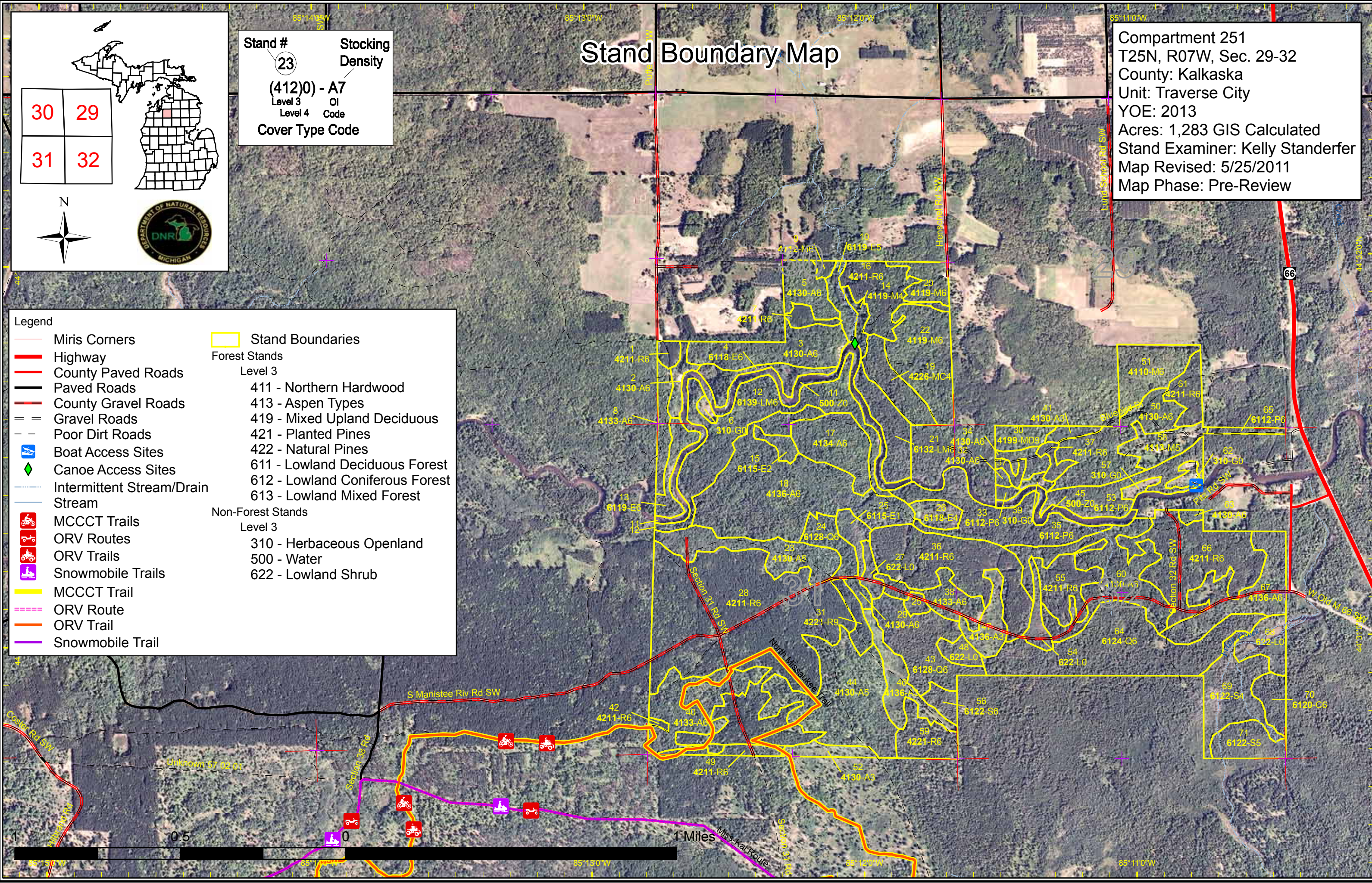
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
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Non-Forest Stands

Level 3

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- 622 - Lowland Shrub



Dedicated & Proposed Special Conservation Area Map

Compartment 251
 T25N, R07W, Sec. 29-32
 County: Kalkaska
 Unit: Traverse City
 YOE: 2013
 Acres: 1,283 GIS Calculated
 Stand Examiner: Kelly Standerfer
 Map Revised: 5/25/2011
 Map Phase: Pre-Review

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

30 29
 31 32

Legend

Special Conservation Areas

- Boat Access Sites
- Canoe Access Sites

High Conservation Value Area

- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams

Stand Boundaries

Forest Stands

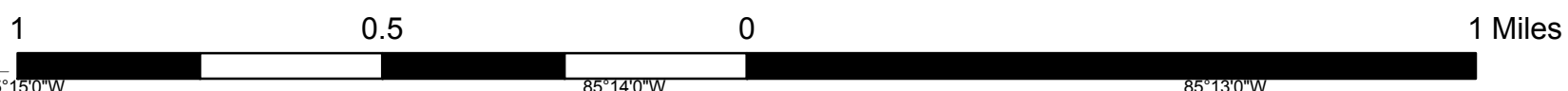
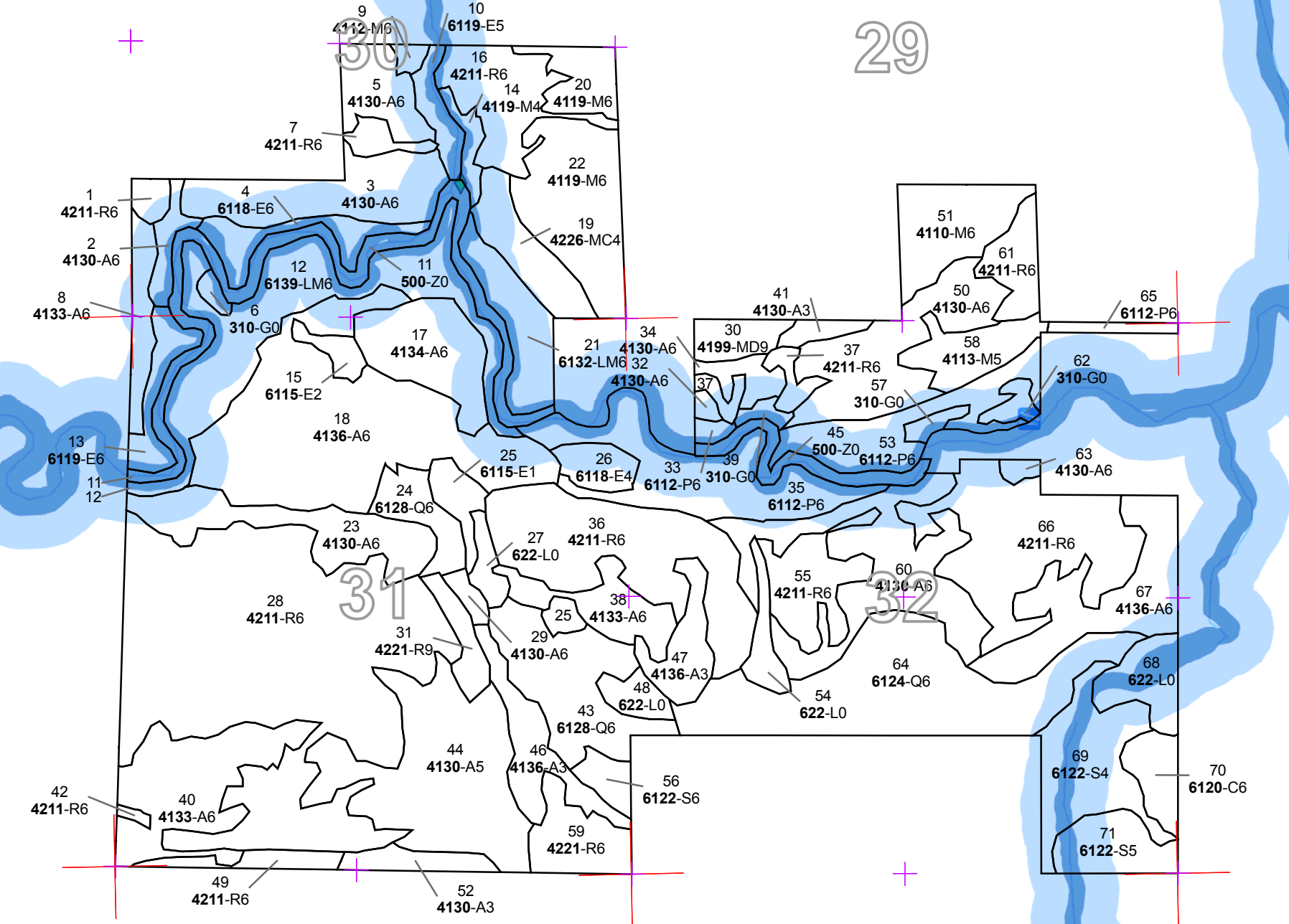
Level 3

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- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 611 - Lowland Deciduous Forest
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- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub



85°15'0"W 85°14'0"W 85°13'0"W 85°12'0"W 85°11'0"W
 44°3'0"N 44°3'10"N 44°3'20"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	33	0	3	80	215	67	0	41	0	0	0	0	0	0	440
Cedar	0	0	0	0	0	0	0	8	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
Lowland Aspen/Balsam Poplar	0	0	0	0	0	3	0	61	0	0	0	0	0	0	0	64
Lowland Conifers	0	0	0	0	0	10	0	0	95	0	0	0	0	0	0	105
Lowland Deciduous	0	0	0	0	0	9	11	26	0	0	0	0	0	0	0	46
Lowland Mixed Forest	0	0	0	0	0	0	0	49	17	0	0	0	0	0	0	66
Lowland Shrub	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Lowland Spruce/Fir	0	0	0	0	0	5	40	0	0	0	0	0	0	0	0	45
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	7
Natural Mixed Pines	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	15
Northern Hardwood	0	0	0	0	0	6	0	76	0	0	0	0	0	0	0	82
Red Pine	0	0	0	0	0	314	14	0	6	0	0	0	0	0	0	335
Water	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Total	71	33	0	3	80	562	131	236	166	0	0	0	0	0	0	1283



Table 2 – Proposed Treatment Summaries

Traverse City Mgt. Unit
Year of Entry 2013

Compartment 251
Total Compartment Acres: 1283

Acres by Treatment Type

Commercial Harvest - 340	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 14	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	148	0	0	0	0	0		148
Lowland Aspen/Balsam Poplar	7	0	0	0	0	0		7
Mixed Upland Deciduous	0	0	0	7	0	0		7
Northern Hardwood	0	20	0	0	2	0		22
Red Pine	0	0	0	0	170	0		170
Total	155	20	0	7	171	0		354



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	61251001-Cut	3.2	42110 - Planted Red Pine	High Density Pole	48	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Cut 2 rows leave three. goal is to eventually push the stand to a more natural look due to its proximity to the river. Stand needs thinned bad. tight <u>Specs:</u> rows & tall. Chip tops to minimize bark beetle potential</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u></p>									
3	61251003-Cut	17.7	4130 - Aspen	High Density Pole	75	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Would make a nice habitat improvement cut. Cut out all aspen and mark some mixed hardwoods to open up enough for aspen regen. save some <u>Specs:</u> or all oak, beech and conifer. Buffer ridge top by ~50' per natural river guidelines and buffer drain area @ west edge of stand. Access will be from private to the north</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u></p>									
5	61251005-Cut	11.8	4130 - Aspen	High Density Pole	75	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Big mature aspen mixed with hardwoods. Slopes down to Nelson Creek. Buffer creek by at least 175 likely more. Cut out all aspen and mark <u>Specs:</u> some hardwood so that stand is open enough for aspen regen. OK to leave some more pure maple areas thicker. Save all oak, conifer and beech for mast and thermal cover. Brush in skid trails with harvest to minimize erosion potential.</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u></p>									
7	61251007-Cut	4.0	42110 - Planted Red Pine	High Density Pole	48	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Cut 2 rows leave three. goal is to eventually push the stand to a more natural look due to its proximity to the river. Stand needs thinned bad. tight <u>Specs:</u> rows & tall. Chip tops to minimize bark beetle potential</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u></p>									
9	61251009-Cut	1.7	4112 - Maple, Beech, Cherry Association	High Density Pole	48	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Cut 2 rows leave three. goal is to eventually push the stand to a more natural look due to its proximity to the river. Stand needs thinned bad. tight <u>Specs:</u> rows & tall. Chip tops to minimize bark beetle potential</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u></p>									



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
23 61251023_sm all-Cut	7.6	4130 - Aspen	High Density Pole	38	Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal

Prescription Some is nice and some is quaking in rough shape. May want to treat the west ~1/3 of the stand to break up the aspen age of the area. Save all pine and Fir under 4" dbh if treated. East end has a W6 inclusion. Buffer river by at least 175' if cut.

Other Comments:

Next Steps:

28 61251028-Cut	149.5	42110 - Planted Red Pine	High Density Pole	43	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Per last YOE comments, stand is set up to be row thinned under "Big FLat Add On". All aspen is being taken out over 4" and maple in the take rows is to be cut. Oak and cherry are being saved for diversity. Add Stand 42 to this sale if Lutke is interested in a few more cords of red pine @ contract price.

Other Comments:

Next Steps:

29 61251029-Cut	2.6	4130 - Aspen	High Density Pole	45	Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
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Prescription South end has some smaller diameter maple. Cut out all aspen, maple, birch and fir over 4" dbh. Save all pine for retention and buffer LO @ east end slightly for retention adn future snags as well.

Other Comments:

Next Steps:

30 61251030-Cut	7.2	4199 - Other Mixed Upland Deciduous	High Density Log	75	Harvest	Shelterwood	4121 - Oak, Aspen	Cmpt. Review Proposal
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Prescription Big oak mixed with red maple and aspen. thick understory of ironwood in spots. Cut all maple and aspen and cut some oak to try to stump sprout. Save all conifer.

Other Comments:

Next Steps:

31 61251031-Cut	6.5	42210 - Natural Red Pine	High Density Log	75	Harvest	Crown Thinning	42210 - Natural Red Pine	Cmpt. Review Proposal
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Prescription Nice natural pine stand. overdue for a thinning. Cut out all aspen, jack and maple and thin from below taking out the trees that are overtopped. OK to mark some nice log and pole trees as well but overall try to cut the suppressed trees releassing the dominant and co-dom trees.

Other Comments:

Next Steps:



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
32 61251032-Cut	1.3	4130 - Aspen	High Density Pole	55	Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal

Prescription: Sparse to good aspen. Cut now for age class diversity + habitat improvement of the area. 175' buffer on river, save all conifer and oak for diversity and retention. stand is to small to leave a pocket of retention.

Other Comments:

Next Steps:

34 61251034-Cut	5.5	4130 - Aspen	High Density Pole	55	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription: Sparse to good aspen. Cut now for age class diversity + habitat improvement of the area. 175' buffer on river, save all conifer and oak for diversity and retention. Bulk of retention will be @ south end of stand to buffer opening and natural river.

Other Comments:

Next Steps:

38 61251038-Cut	14.2	4133 - Aspen, Mixed Pine	High Density Pole	42	Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
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Prescription: Could cut or hold as needed. Cut all A, Maple, and fir over 4" dbh. OK to mark some pine to cut as well but save the majority for species diversity. Retention will be pine, small fir a few oak and the edges of stand. Save some cherry as well.

Other Comments:

Next Steps:

44 61251044-Cut	54.1	4130 - Aspen	Medium Density Pole	40	Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
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Prescription: Poor quality aspen, ~ 3 stick stuff. aspen is in rough shape. Final harvest but save all oak and pine for diversity and retention.

Other Comments:

Next Steps:

50 61251050_sm all-Cut	8.8	4130 - Aspen	High Density Pole	45	Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
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Prescription: variable stand some is ready to be cut and some is pretty small yet. Cut the middle ~1/3 of the stand to break up the aspen age class. Rest should hold 10 yrs good. Save all conifer and oak, final harvest the rest.

Other Comments:

Next Steps:

**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
51	61251051-Cut	20.3	4110 - Sugar Maple Association	High Density Pole	68	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription: Thinned last YOE but looks liek alot of the smaller stuff was left. Could do another light thinning, will likely be pretty low volumes but should sell
Specs: as a small firewood or pulp sale. Cut out most or all ash as it is being hit by EAB :-)

Other
Comments:

Next
Steps:

53	61251053_sm all-Cut	7.0	6112 - Lowland Aspen	High Density Pole	65	Harvest	Clearcut	6112 - Lowland Aspen	Cmpt. Review Proposal
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Prescription: Nice aspen, most is lowland but some is pretty dry. could possibly do a small commercial habitat cut. Should regenerate nicely. Or just hold for
Specs: river vegetative buffer. minimum 175' river buffer if cut.

Other
Comments:

Next
Steps:

60	61251060_sm all-Cut	17.5	4130 - Aspen	High Density Pole	50	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription: Nice aspen for the most part. Buffer drain area in middle of stand and leave a 175' buffer on river, these areas will serve as retention. save all
Specs: balsam under 4" dbh, all oak and any pine. Should regenerate nicely. Save west half of stand for age diversity

Other
Comments:

Next
Steps:

67	61251067_sm all-Cut	5.2	4136 - Aspen, Mixed Conifer	High Density Pole	45	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
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Prescription: Seems to have 2 or 3 ages of aspen. oldest looks to be about 45 and some looks to be 35ish, Far northeast seems to be older stuff for the most
Specs: part. Clearcut this portion but save small buffer around vernal pond and save some or all pine and oak. look to do a diameter limit on fir, cut all
over 4" dbh? This will help establish property line as well. Needed corners are already in.

Other
Comments:

Next
Steps:

**Total Treatment
Acreage Proposed: 345.8**

**Table 4 -- Treatments Prescribed with
a Limiting Factor**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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#Error

Prescription
Specs:

Other
Comment:

Next
Steps:

Limiting Factor and No
Treatment Reason

**Total Treatment
Acreage Proposed: 0**

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Traverse City Mgt. Unit

5 – Forested Stands

Compartment: 251
Year of Entry: 2013

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42110 - Planted Red Pine	High Density Pole	3.2	48	200+	Stand is very thick and very tall. Cut two rows leave three rows due to tight spacing. Push towards more of a natural stand due to proximity to the river. Chip tops to minimize bark beetle potential.
2	4130 - Aspen	High Density Pole	5.2	55	81-110	
3	4130 - Aspen	High Density Pole	28.0	75	141-170	
4	6118 - Lowland Deciduous with Cedar	High Density Pole	10.9	65	111-140	
5	4130 - Aspen	High Density Pole	12.9	75	111-140	
7	42110 - Planted Red Pine	High Density Pole	4.0	48	200+	
8	4133 - Aspen, Mixed Pine	High Density Pole	8.9	55	81-110	
9	4112 - Maple, Beech, Cherry Association	High Density Pole	1.7	48	141-170	
10	6119 - Mixed Lowland Deciduous Forest	Medium Density Pole	6.5	65	51-80	
12	6139 - Mixed Lowland Forest	High Density Pole	49.2	65	111-140	
13	6119 - Mixed Lowland Deciduous Forest	High Density Pole	8.9	65	111-140	
14	4119 - Mixed Northern Hardwoods	Low Density Pole	4.1	45	1-50	
15	6115 - Lowland Ash	Medium Density	4.0	55	1-50	
16	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	21.6	48	111-140	
17	4134 - Aspen, Spruce/Fir	High Density Pole	22.7	38	51-80	
18	4136 - Aspen, Mixed Conifer	High Density Pole	80.8	45	111-140	
19	42260 - Natural Pine, Mixed Deciduous	Low Density Pole	14.5	60	141-170	
20	4119 - Mixed Northern Hardwoods	High Density Pole	10.0	60	51-80	



Stand	Traverse City Mgt. Unit			5 – Forested Stands		Compartment: 251 Year of Entry: 2013
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	6132 - Mixed Lowland Forest with Cedar	High Density Pole	16.8	71	171-200	
22	4119 - Mixed Northern Hardwoods	High Density Pole	33.0	65	51-80	
23	4130 - Aspen	High Density Pole	25.2	38	81-110	
24	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	10.2	45	81-110	
25	6115 - Lowland Ash	Low Density Sapling	8.7	45	1-50	
26	6118 - Lowland Deciduous with Cedar	Low Density Pole	6.8	56	1-50	
28	42110 - Planted Red Pine	High Density Pole	149.5	43	171-200	Per last YOE comments, stand is set up to be row thinned under "Big FLat Add On". All aspen is being taken out over 4" and maple in the take rows is to be cut. Oak and cherry are being saved for diversity.
29	4130 - Aspen	High Density Pole	2.6	45	81-110	
30	4199 - Other Mixed Upland Deciduous	High Density Log	7.2	75	111-140	
31	42210 - Natural Red Pine	High Density Log	6.5	75	171-200	
32	4130 - Aspen	High Density Pole	1.3	55	81-110	
33	6112 - Lowland Aspen	High Density Pole	1.7	65	111-140	
34	4130 - Aspen	High Density Pole	5.5	55	81-110	
35	6112 - Lowland Aspen	High Density Pole	36.9	60	111-140	
36	42110 - Planted Red Pine	High Density Pole	49.5	48	111-140	
37	42110 - Planted Red Pine	High Density Pole	6.2	45	111-140	
38	4133 - Aspen, Mixed Pine	High Density Pole	14.2	42	111-140	

S t a n d	Traverse City Mgt. Unit		5 – Forested Stands			Compartment: 251 Year of Entry: 2013	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range		
40	4133 - Aspen, Mixed Pine	High Density Pole	32.4	37	51-80		
41	4130 - Aspen	High Density Sapling	3.3	25			
42	42110 - Planted Red Pine	High Density Pole	0.8	45	141-170		
43	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	30.7	75	81-110		
44	4130 - Aspen	Medium Density Pole	54.1	40	51-80		
46	4136 - Aspen, Mixed Conifer	High Density Sapling	15.4	7			
47	4136 - Aspen, Mixed Conifer	High Density Sapling	11.4	5			
49	42110 - Planted Red Pine	High Density Pole	5.7	43	141-170		
50	4130 - Aspen	High Density Pole	32.4	45	81-110		
51	4110 - Sugar Maple Association	High Density Pole	20.3	68	141-170		
52	4130 - Aspen	High Density Sapling	6.4	5			
53	6112 - Lowland Aspen	High Density Pole	22.7	65	111-140		
55	42110 - Planted Red Pine	High Density Pole	16.9	48	111-140		
56	6122 - Black Spruce	High Density Pole	5.0	45	81-110		
58	4113 - R.Maple, Conifer	Medium Density Pole	12.8	61	1-50		
59	42210 - Natural Red Pine	High Density Pole	13.8	52	81-110		
60	4130 - Aspen	High Density Pole	44.0	50	141-170		
61	42110 - Planted Red Pine	High Density Pole	10.0	48	111-140		



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Traverse City Mgt. Unit

5 – Forested Stands

Compartment: 251
Year of Entry: 2013

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
63	4130 - Aspen	High Density Pole	1.7	55	111-140	
64	6124 - Lowland Spruce- Fir	High Density Pole	64.5	75	111-140	
65	6112 - Lowland Aspen	High Density Pole	2.9	45	51-80	
66	42110 - Planted Red Pine	High Density Pole	46.9	48	111-140	
67	4136 - Aspen, Mixed Conifer	High Density Pole	31.3	45	81-110	
69	6122 - Black Spruce	Low Density Pole	26.7	55	1-50	
70	6120 - Lowland Cedar	High Density Pole	8.4	65	81-110	
71	6122 - Black Spruce	Medium Density Pole	13.0	55	1-50	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
6	310 - Herbaceous Openland	1.8	No	Unspecified	
11	50 - Water	26.0	No	Unspecified	
27	622 - Lowland Shrub	4.3	No	Unspecified	
39	310 - Herbaceous Openland	2.0	No	Unspecified	
45	50 - Water	8.5	No	Unspecified	manistee river
48	622 - Lowland Shrub	5.2	No	Unspecified	
54	622 - Lowland Shrub	6.0	No	Unspecified	
57	310 - Herbaceous Openland	2.3	No	Unspecified	
62	310 - Herbaceous Openland	3.2	Yes	Unspecified	boat launch on Manistee river
68	622 - Lowland Shrub	11.5	No	Unspecified	



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



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
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 year 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	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.