



## TRAVERSE CITY FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 31      ENTRY YEAR: 2013

Compartment Acreage: 3,100 acres      County: Benzie

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**Stand Examiner:** Craig Allen

**Legal Description:** T25N- R13W; Sections 20, 21, 28, 29, 31, 32, 33

**Management Goals:** This compartment was previously managed under the Pere Marquette State Forest Management Plan. Under this plan the past emphasis of management was designated as “intensive vegetative management” for wildlife.

Much of the aspen in this compartment was harvested and reestablished 30 to 45 years ago for wildlife habitat purposes. There is now a need to start breaking apart some of these large parcels to make new age classes of aspen to help further diversify and even out the age class distribution in the area. Also, target some of the older aspen stands (50+years) that are in need of reestablishment. This creates a more sustainable and healthy forest resource.

Other forest treatments proposed include thinning of red pine plantations, and converting a poor quality jack pine plantation to red pine.

**Soil and Topography:** Most of this compartment lies within a lake plain that is entirely level. Soils within this lake plain consist of deep mucks with some loamy sands intermixed. There is a high water table throughout a majority of the area. Low creek banks and seasonal flooding create wide variability in water levels. Some areas maintain flooded timber almost year round. The Little Betsie River flows across this plain as do several feeder creeks. Exception to the lake plain is found along the north edge of the compartment which is within an outwash plain with excessively drained deep sands.

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

There is continuous State ownership in the compartment, with no private in holdings. The village of Thompsonville lies to the southwest, and Nessen City is just outside the compartment to the southeast. There are a few residences, within the compartment, but most private property is experiencing slow growth.

**Unique, Natural Features:** The Little Betsie River flow through the compartment and is a tributary of the Betsie River which is a designated Michigan Natural River. Any proposed management treatments near this river system will follow the guidelines of the Natural River Plan.

**Archeological, Historical, and Cultural Features:** There are a few old homestead sites within or near the compartment.

**Special Management Designations or Considerations:** Continue with the age class stratification of aspen types in the area to benefit and enhance wildlife that are dependant on this variability. This also affords good sustainable Forest management for timber production as well as a healthy multi age forest.

In 1997, a large old growth area was proposed, a small part of which went into section 28 of this compartment. This is in a natural drainage area of lowland forest types that ultimately drains into the Little Betsie River. Most of this same block of land is now being forwarded for possible Special Conservation Area (SCA) status, to be managed as a remote, mature, late-successional lowland forest.

**Watershed and Fisheries Considerations:** The Little Betsie River flows through Compartment 31. The Little Betsie River is a high-quality trout stream tributary to the Betsie River, and supports self-sustaining populations of brook trout, brown trout, steelhead, coho salmon, and Chinook salmon. Due to its cold, groundwater-fed nature, the Little Betsie River helps in maintaining the cold water thermal regime of the Betsie River. Beaver activity within the Little Betsie and its tributaries will negatively affect the trout populations they support by fragmenting habitat and degrading water quality (warmer water temperatures). Therefore, Fisheries Division recommends large enough vegetative buffers for the aspen clearcuts in Stands 59 and 89 to discourage beaver activity along the Little Betsie River.

*(Comments by, Mark Tonello, DNR Fisheries Biologist, Cadillac, OSC).*

**Wildlife Habitat Considerations:** State lands in this compartment fall mainly within a flat, very poorly drained lake plain landscape. Mucky soils predominate and harbor large areas of aspen, mixed lowland hardwoods, and lowland brush. This area has a history of aspen cutting, which should continue, resulting in a mosaic of cover types and age classes. Small, better-drained areas have pine plantations and some natural white pine. Wetter, or inundated areas, should be allowed to succeed to later successional stages, eventually including lowland conifers or upland white pine patches. Small patch cuts emulating natural blow down pockets would be appropriate in these stands. Mature cover is most important in the riparian area along the Little Betsie River. Red-shouldered hawks are likely inhabitants of this area, and should be accommodated in timber harvest specifications if found. Other species using these habitats include deer, otter, blue racer, woodcock, barred owl, golden-winged warbler, and black bear.

Portions of this compartment also fall into flat outwash plain and sandy, flat lake plain. Pine plantations, shrubby openings, and aspen occupy these areas. The northern part of the compartment on outwash plain also has a history of aspen cutting toward increased age class diversity to benefit grouse, woodcock, golden-winged warbler, deer, and other species. Such early successional management should be continued in this area, incorporating snags, leave trees, brush piles, and downed logs to replicate a wildfire-altered forest. 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. Opening maintenance will continue in the compartment to benefit open land species such as cedar waxwing, wild turkey, mourning dove, meadow vole, or red fox. *(Comments by Steve Griffith, DNR Wildlife Div. Traverse City F.O.)*

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of lacustrine sand and gravel, glacial outwash sand and gravel and postglacial alluvium and minor coarse-textured glacial till. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Devonian Ellsworth Shale. The Ellsworth is used for cement. The nearest gravel pit is one-half mile to the west in Section 25, and potential is considered good. This area is located in the Antrim Shale gas play, and several wells are located in the Compartment. The Niagaran reef trend has been explored for in part of this compartment, but production has been poor. Most of the State land is currently leased for oil and gas development. The Antrim Shale appears to have potential. *(Comments by Tom Hoane, DNR Geologist, FM Division)*

**Vehicle Access:** There are several gravel and seasonal county roads in and around the compartment offering good access to State lands. Lindy road is paved and runs through the south end of the area. There are also a few forest "2-track" roads in various areas of the compartment that are in good condition and are used for public and DNR land management accessibility.

**Survey Needs:** There are no known survey needs within the compartment at this time.

**Recreational Facilities and Opportunities:** The Betsie River snowmobile trail goes along the north edge of the compartment then south through the middle of the compartment on to Long road west across Bentley road to Thurman road south down to the county line making its way into Thompsonville. Various types of

dispersed forest recreation occur in the compartment. Examples include hunting, fishing, trapping, cross-country skiing, hiking, mushroom/berry picking, biking, horseback riding and dispersed camping.

**Fire Protection:** DNR Wildfire Protection is from the Platte River Field Office. Travel time is acceptable, and access in this compartment is good. There are only a couple residences within this compartment, so urban interface issues are not too much of a concern. Forest cover types in this area tend not to support catastrophic fires. VFD protection is from the Thompsonville Volunteer Fire Dept. (*Comments by Rod Rader, DNR Fire Officer Supervisor, Traverse City F.O.*).

**Additional Compartment Information:**

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

**Cover Type by Age Class**  
**Proposed Treatments – No Limiting Factors**  
**Proposed Treatments – With Limiting Factors**

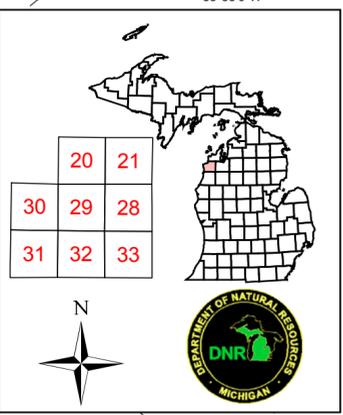
\* **The following information is displayed on the attached compartment maps:**

**Base feature information, stand numbers, cover types**  
**Proposed treatments**  
**Proposed road access system**

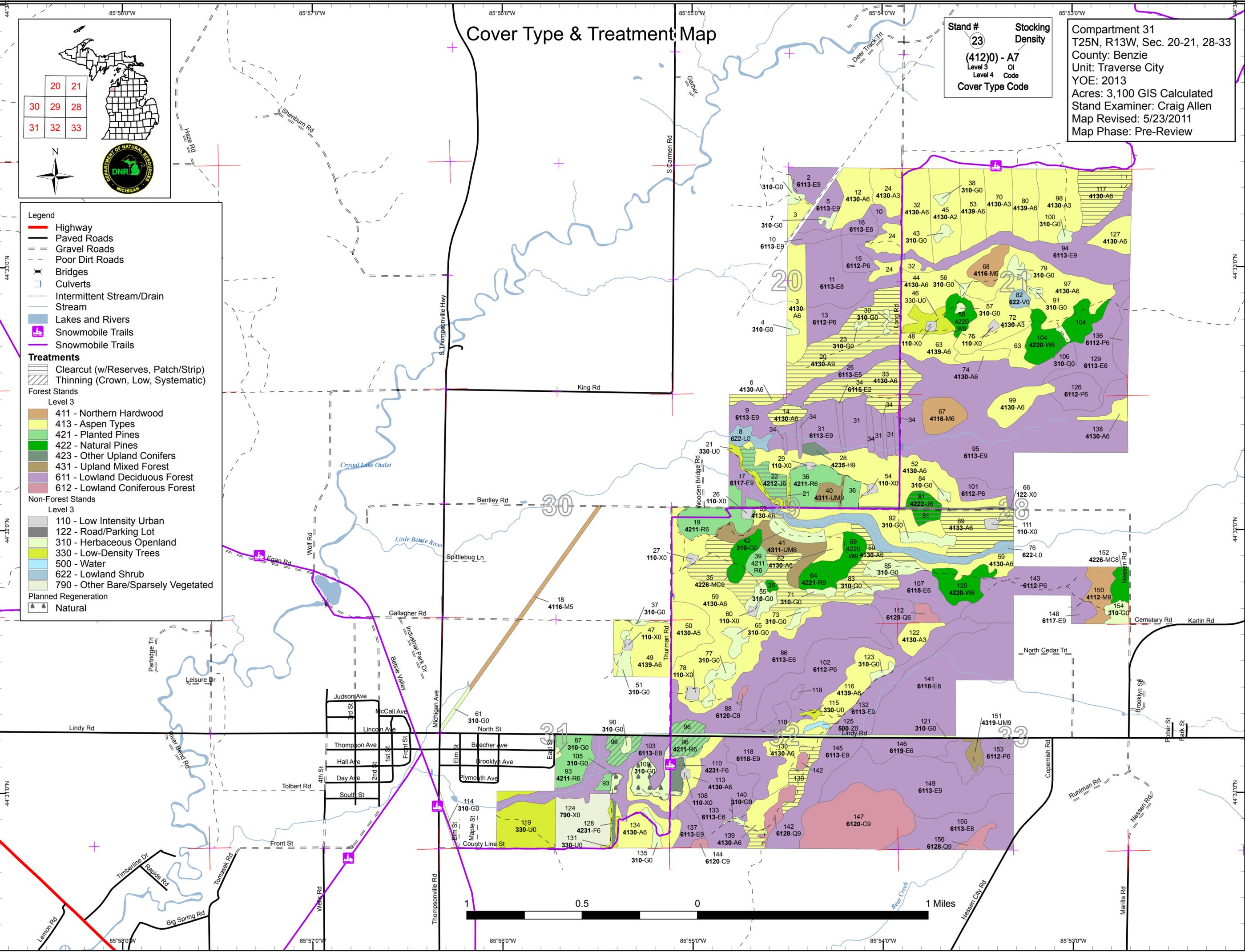
# Cover Type & Treatment Map

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

Compartment 31  
 T25N, R13W, Sec. 20-21, 28-33  
 County: Benzie  
 Unit: Traverse City  
 YOE: 2013  
 Acres: 3,100 GIS Calculated  
 Stand Examiner: Craig Allen  
 Map Revised: 5/23/2011  
 Map Phase: Pre-Review



- Legend**
- Highway
  - Paved Roads
  - Gravel Roads
  - - - Poor Dirt Roads
  - Bridges
  - Culverts
  - Intermittent Stream/Drain
  - Stream
  - Lakes and Rivers
  - Snowmobile Trails
  - Snowmobile Trails
- Treatments**
- Clearcut (w/Reserves, Patch/Strip)
  - Thinning (Crown, Low, Systematic)
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
  - 413 - Aspen Types
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 423 - Other Upland Conifers
  - 431 - Upland Mixed Forest
  - 611 - Lowland Deciduous Forest
  - 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3
- 110 - Low Intensity Urban
  - 122 - Road/Parking Lot
  - 310 - Herbaceous Openland
  - 330 - Low-Density Trees
  - 500 - Water
  - 622 - Lowland Shrub
  - 790 - Other Bare/Sparsely Vegetated
- Planned Regeneration**
- Natural



# Stand Boundary Map

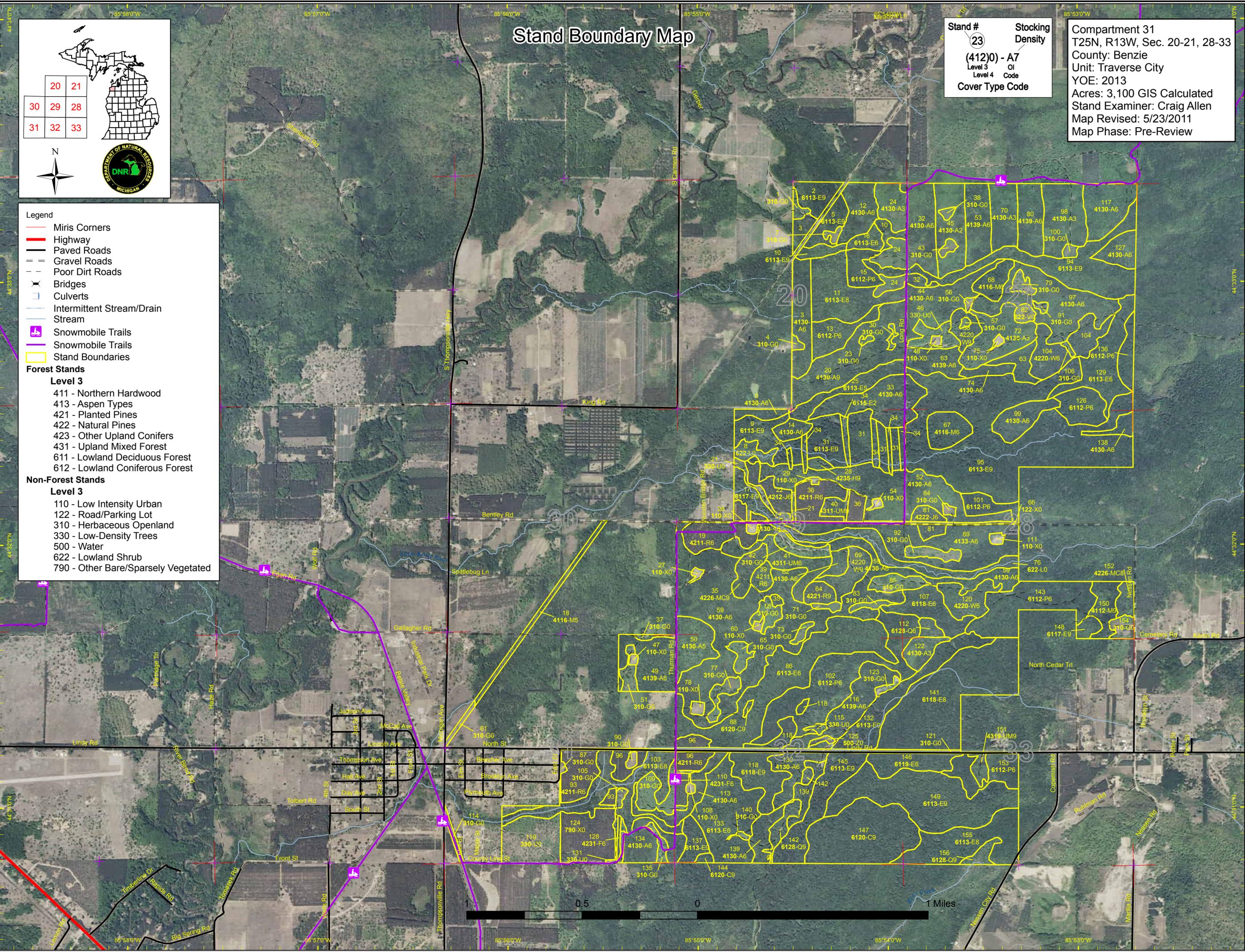
Stand # **23**  
**(412)0 - A7**  
 Level 3 OI  
 Level 4 Code  
 Cover Type Code

Compartment 31  
 T25N, R13W, Sec. 20-21, 28-33  
 County: Benzie  
 Unit: Traverse City  
 YOE: 2013  
 Acres: 3,100 GIS Calculated  
 Stand Examiner: Craig Allen  
 Map Revised: 5/23/2011  
 Map Phase: Pre-Review

20	21
30	29 28
31	32 33

N

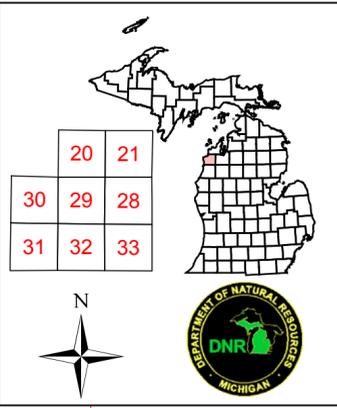
- Legend**
- Miris Corners
  - Highway
  - Paved Roads
  - Gravel Roads
  - Poor Dirt Roads
  - Bridges
  - Culverts
  - Intermittent Stream/Drain
  - Stream
  - Snowmobile Trails
  - Snowmobile Trails
  - Stand Boundaries
- Forest Stands**
- Level 3**
- 411 - Northern Hardwood
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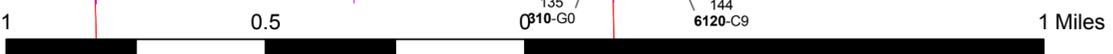
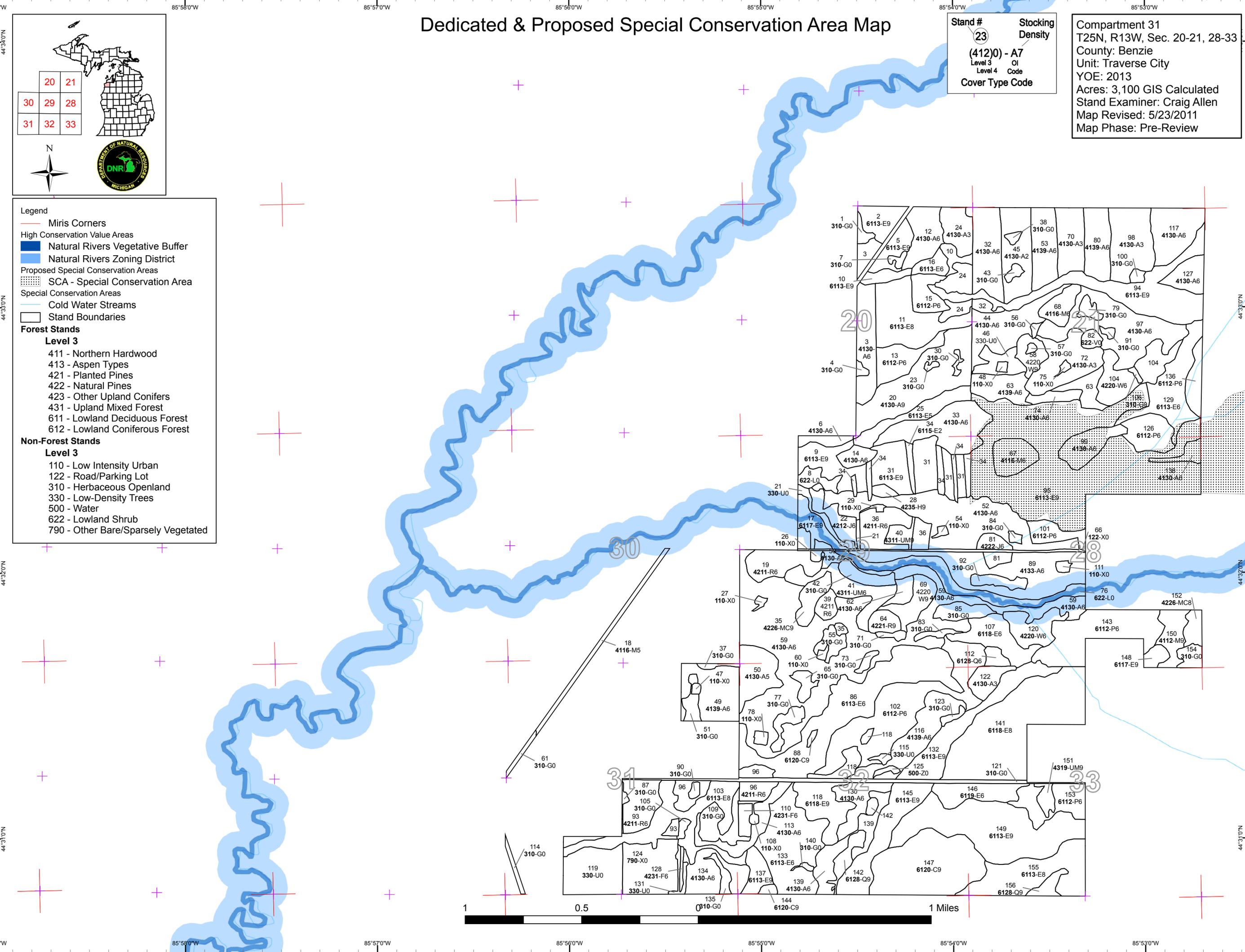
# Dedicated & Proposed Special Conservation Area Map

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

Compartment 31  
 T25N, R13W, Sec. 20-21, 28-33  
 County: Benzie  
 Unit: Traverse City  
 YOE: 2013  
 Acres: 3,100 GIS Calculated  
 Stand Examiner: Craig Allen  
 Map Revised: 5/23/2011  
 Map Phase: Pre-Review



- Legend**
- Miris Corners
  - High Conservation Value Areas
    - Natural Rivers Vegetative Buffer
    - Natural Rivers Zoning District
  - Proposed Special Conservation Areas
    - ▨ SCA - Special Conservation Area
  - Special Conservation Areas
    - Cold Water Streams
    - Stand Boundaries
  - Forest Stands**
    - Level 3**
      - 411 - Northern Hardwood
      - 413 - Aspen Types
      - 421 - Planted Pines
      - 422 - Natural Pines
      - 423 - Other Upland Conifers
      - 431 - Upland Mixed Forest
      - 611 - Lowland Deciduous Forest
      - 612 - Lowland Coniferous Forest
    - Non-Forest Stands**
      - Level 3**
        - 110 - Low Intensity Urban
        - 122 - Road/Parking Lot
        - 310 - Herbaceous Openland
        - 330 - Low-Density Trees
        - 500 - Water
        - 622 - Lowland Shrub
        - 790 - Other Bare/Sparsely Vegetated



**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 +		Uneven Age
Aspen	0	61	94	138	357	351	28	59	0	0	0	0	0	0	0	1088
Bare/Sparsely Vegetated	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Bog	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Cedar	0	0	0	0	0	0	0	0	0	70	0	3	0	0	0	72
Hemlock	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Herbaceous Openland	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
Jack Pine	0	0	0	0	0	0	12	0	9	0	0	0	0	0	0	21
Low-Density Trees	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
Lowland Aspen/Balsam Poplar	0	0	0	24	176	18	0	0	0	0	0	0	0	0	0	218
Lowland Conifers	0	0	0	0	0	0	5	0	0	16	0	0	0	0	0	20
Lowland Deciduous	0	0	0	41	205	19	0	0	0	395	403	33	0	0	0	1097
Lowland Shrub	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	7	0	0	0	0	13	20
Northern Hardwood	0	0	0	0	10	27	0	0	0	14	0	0	0	0	0	52
Red Pine	0	0	0	6	0	0	91	0	7	0	0	0	0	0	0	105
Upland Mixed Forest	0	0	0	24	0	0	0	0	6	5	0	0	0	0	0	35
Upland Spruce/Fir	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
Urban	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
White Pine	0	0	0	0	0	0	61	0	9	0	0	0	0	0	0	71
<b>Total</b>	<b>293</b>	<b>61</b>	<b>94</b>	<b>233</b>	<b>748</b>	<b>416</b>	<b>203</b>	<b>59</b>	<b>32</b>	<b>510</b>	<b>403</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>3100</b>



## Table 2 – Proposed Treatment Summaries

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

**Compartment 031**  
**Total Compartment Acres: 3100**

### Acres by Treatment Type

Commercial Harvest - 299	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

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
<b>Aspen</b>	253	0	0	0	0	0	253
<b>Jack Pine</b>	21	0	0	0	0	0	21
<b>Red Pine</b>	0	0	0	0	20	0	20
<b>Upland Spruce/Fir</b>	0	0	0	0	5	0	5
<b>Total</b>	<b>275</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>299</b>



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
6	61031006-Cut	5.7	4130 - Aspen	High Density Pole	57	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription --Craig Allen comments: Clearcut to regenerate and expand aspen. Leave small strip of trees along north edge of stand (between private fence and old 2 track) as a retention strip.

Other  
Comments:

Next  
Steps:

14	61031014-Cut	7.1	4130 - Aspen	High Density Pole	48	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
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Prescription --Craig Allen comments: Clearcut stand to regenerate and expand aspen. No retention due to small isolated stand. Would like to open up this as much as possible to sunlight to expand aspen.

Other  
Comments:

Next  
Steps:

20	61031020-Cut	58.6	4130 - Aspen	High Density Log	65	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
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Prescription --Craig Allen : comments: Clearcut to regenerate and expand aspen component. Leave any conifers. Mark some leave islands and/or leave trees of aspen, maple, cherry.

Other  
Comments:

Next  
Steps:

22	61031022-Cut	12.1	42120 - Planted Jack Pine	High Density Pole	55	Harvest	Clearcut	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription --Craig Allen comments: Clearcut stand to convert to red pine. No retention due to conversion.

Other  
Comments:

Next  
Steps: After stand is harvested, then trench and plant to red pine.

33	61031033-Cut	39.5	4130 - Aspen	High Density Pole	49	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
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Prescription --Craig Allen : Clearcut stand to regenerate and expand aspen. Mark some leave islands and/or scattered leave trees. Some of the leave trees should include a few of the large red maple trees near Long road.

Other  
Comments:

Next  
Steps:



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
59	61031059-Cut_small	69.5	4130 - Aspen	High Density Pole	31	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription --Craig Allen comments: Clearcut stand to regenerate and expand aspen component. Mark some leave islands and/or scattered leave trees.  
Specs: Leave majority of large DBH white pine that may be in the area. Keep harvest boundary a minimum of 100 feet away from Betsie River.

Other  
Comments:

Next  
Steps:

81	61031081-Cut	9.3	42221 - Natural Jack Pine, Mixed Deciduous	High Density Pole	70	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
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Prescription --Craig Allen comments: Clearcut stand to regenerate aspen and maple. May possibly get some regen of jack pine too. Mark some leave islands and/or scattered leave trees of various species.

Other  
Comments:

Next  
Steps:

89	61031089-Cut	31.5	4133 - Aspen, Mixed Pine	High Density Pole	43	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
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Prescription --Craig Allen comments: Clearcut to regenerate and expand aspen component. Create some leave islands and/or scattered leave trees. Leave most large DBH white pine. Stay a minimum of 100 feet away from Little Betsie river.

Other  
Comments:

Next  
Steps:

96	61031096-Cut	19.9	42110 - Planted Red Pine	High Density Pole	55	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription --Craig Allen comments: Thin red pine. Reduce volume by approx. 1/3. Can acheive by select marking or by taking every 3rd tree in each row.

Other  
Comments:

Next  
Steps:

110	61031110-Cut	4.9	42310 - Planted Spruce	High Density Pole	50	Harvest	Systematic Thinning	42310 - Planted Spruce	Cmpt. Review Proposal
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Prescription Thin spruce by cutting 2 rows and leaving 2 rows.

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
117	61031117-Cut	27.5	4130 - Aspen	High Density Pole	36	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription --Craig Allen : comments: Clearcut stand to regenerate and expand aspen component. Leave any conifers and oak. Possibly, mark some leave  
Specs: islands and/or leave trees.

Other  
Comments:

Next  
Steps:

139	61031139-Cut	13.9	4130 - Aspen	High Density Pole	50	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
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Prescription --Craig Allen comments: Clearcut stand to regenerate and expand aspen. Leave any conifers and mark some scattered leave trees of maple  
Specs: and aspen.

Other  
Comments:

Next  
Steps:

**Total Treatment  
Acreage Proposed: 299.4**

**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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Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

**Total Treatment Acreage Proposed: 0**



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	6113 - Lowland Maple	High Density Log	13.6	94		Stand is currently inaccessible due to adjacent privately owned, and fenced old railroad grade.
3	4130 - Aspen	High Density Pole	31.5	27		some areas are lowland
5	6113 - Lowland Maple	High Density Log	11.7	85		standing water
6	4130 - Aspen	High Density Pole	5.7	57		
9	6113 - Lowland Maple	High Density Log	22.4	85		
10	6113 - Lowland Maple	High Density Log	11.2	85		
11	6113 - Lowland Maple	Medium Density Log	43.4	85		standing water in most locations year round.
12	4130 - Aspen	High Density Pole	20.4	27		
13	6112 - Lowland Aspen	High Density Pole	18.2	47		
14	4130 - Aspen	High Density Pole	7.1	48		
15	6112 - Lowland Aspen	High Density Pole	12.6	27		
16	6113 - Lowland Maple	High Density Pole	7.2	27		wet year round
17	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	11.8	85		little betsie river flood plain
18	4116 - Mixed N. Hardwood - Aspen	Medium Density Pole	10.5	30		portion of old railroad grade going from Bentley road towards Thompsonville road.
19	42110 - Planted Red Pine	High Density Pole	24.8	55	141-170	Thinned twice: 1993 3rd row, 2004 every 3rd tree.
20	4130 - Aspen	High Density Log	58.6	65		
22	42120 - Planted Jack Pine	High Density Pole	12.1	55	51-80	
24	4130 - Aspen	High Density Sapling	29.2	8		

S t a n d	Traverse City Mgt. Unit		5 – Forested Stands			Compartment: 031	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
25	6113 - Lowland Maple	Medium Density Pole	18.7	27			
28	42350 - Upland Hemlock	High Density Log	2.9	86	51-80		
31	6113 - Lowland Maple	High Density Log	44.1	95			
32	4130 - Aspen	High Density Pole	34.6	27			
33	4130 - Aspen	High Density Pole	39.5	49			
34	6115 - Lowland Ash	Medium Density	15.1	22			
35	42260 - Natural Pine, Mixed Deciduous	High Density Log	12.7	Uneven Age	1-50		
36	42110 - Planted Red Pine	High Density Pole	24.5	55	141-170	thinned twice before...row thinned and every 3rd tree.	
39	42110 - Planted Red Pine	High Density Pole	5.8	29	1-50		
40	4311 - Pine, Aspen Mix	High Density Log	6.0	70			
41	4311 - Pine, Aspen Mix	High Density Pole	23.7	29		Was underplanted with red pine in 1982, but some areas did not take well	
44	4130 - Aspen	High Density Pole	33.2	47			
45	4130 - Aspen	Medium Density	28.2	16			
49	4139 - Aspen, Mixed Deciduous	High Density Pole	31.0	33			
50	4130 - Aspen	Medium Density Pole	22.0	31			
52	4130 - Aspen	High Density Pole	76.7	45			
53	4139 - Aspen, Mixed Deciduous	High Density Pole	23.6	27			
58	42200 - Natural White Pine	High Density Log	9.4	76	81-110	highly variable , lots of weevil damage . offers thermal coverage for deer and aesthetic for highly used campsites.	



S t a n d	Traverse City Mgt. Unit		5 – Forested Stands			Compartment: 031	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
59	4130 - Aspen	High Density Pole	196.3	31			
62	4130 - Aspen	High Density Pole	5.9	31			
63	4139 - Aspen, Mixed Deciduous	High Density Pole	28.1	46			
64	42210 - Natural Red Pine	High Density Log	7.5	79	141-170		nice quality natural pine.
67	4116 - Mixed N. Hardwood - Aspen	High Density Pole	16.1	48			good quality.
68	4116 - Mixed N. Hardwood - Aspen	High Density Pole	11.3	47			
69	42200 - Natural White Pine	High Density Log	14.7	55	81-110		more open grown.
70	4130 - Aspen	High Density Sapling	21.2	16			
72	4130 - Aspen	High Density Sapling	31.8	8			scattered mature leave trees of mainly white pine, and cherry.
74	4130 - Aspen	High Density Pole	6.4	27			
80	4139 - Aspen, Mixed Deciduous	High Density Pole	21.8	27			
81	42221 - Natural Jack Pine, Mixed Deciduous	High Density Pole	9.3	70			
86	6113 - Lowland Maple	High Density Pole	89.6	31			
88	6120 - Lowland Cedar	High Density Log	1.0	106	51-80		
89	4133 - Aspen, Mixed Pine	High Density Pole	61.2	43			
93	42110 - Planted Red Pine	High Density Pole	22.0	55	111-140		Thinned twice; 1994, 2004
94	6113 - Lowland Maple	High Density Log	64.2	90			
95	6113 - Lowland Maple	High Density Log	202.7	95			Little Betsie River flows through stand. a lowland drainage area.



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## Traverse City Mgt. Unit

## 5 – Forested Stands

Compartment: 031

Year of Entry: 2013



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
96	42110 - Planted Red Pine	High Density Pole	19.9	55	171-200	Was thinned once in 1995
97	4130 - Aspen	High Density Pole	54.9	47		
98	4130 - Aspen	High Density Sapling	34.3	16		
99	4130 - Aspen	High Density Pole	17.6	48		
101	6112 - Lowland Aspen	High Density Pole	11.2	26		
102	6112 - Lowland Aspen	High Density Pole	74.6	31		
103	6113 - Lowland Maple	Medium Density Log	48.2	85		wet with creeks and drainages.
104	42200 - Natural White Pine	High Density Pole	29.1	57	81-110	
107	6118 - Lowland Deciduous with Cedar	High Density Pole	23.6	31	1-50	
110	42310 - Planted Spruce	High Density Pole	4.9	50	111-140	
112	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	4.5	55		
113	4130 - Aspen	High Density Pole	16.2	31		
116	4139 - Aspen, Mixed Deciduous	High Density Pole	32.8	44		also contains some scattered white pine, fir, cedar mostly upland but some lowland mixed in.
117	4130 - Aspen	High Density Pole	27.5	36		
118	6118 - Lowland Deciduous with Cedar	High Density Log	32.9	106		
120	42200 - Natural White Pine	High Density Pole	17.5	55	81-110	nice quality natural pine
122	4130 - Aspen	High Density Sapling	10.7	14		mostly upland, but some wet areas
126	6112 - Lowland Aspen	High Density Pole	18.6	36		

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## Traverse City Mgt. Unit

## 5 – Forested Stands

Compartment: 031

Year of Entry: 2013



Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
4130 - Aspen	High Density Pole	12.8	36		sparse stocking Treat when stand in adjacent compartment 32 is treated. (all the same stand). Majority is in comp 32
42310 - Planted Spruce	High Density Pole	1.6	50	51-80	
6113 - Lowland Maple	High Density Pole	36.5	36		
4130 - Aspen	High Density Pole	16.2	31		New stand added.
6113 - Lowland Maple	High Density Log	37.8	92		
6113 - Lowland Maple	High Density Pole	55.6	31		also contains some scattered cedar
4130 - Aspen	High Density Pole	22.9	31		mostly upland but a few drainages.
6112 - Lowland Aspen	High Density Pole	10.6	36		
6113 - Lowland Maple	High Density Log	10.5	86		New stand added.
4130 - Aspen	High Density Pole	5.8	36		a small upland ridge surrounded by lowland maple
4130 - Aspen	High Density Pole	22.1	50		
6118 - Lowland Deciduous with Cedar	Medium Density Log	102.3	82	1-50	
6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	10.1	80		
6112 - Lowland Aspen	High Density Pole	49.9	31		
6120 - Lowland Cedar	High Density Log	1.8	100		
6113 - Lowland Maple	High Density Log	35.8	92		lots of woody debris. quite a few blowdowns.
6119 - Mixed Lowland Deciduous Forest	High Density Pole	19.2	45		
6120 - Lowland Cedar	High Density Log	69.5	82	1-50	

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## Traverse City Mgt. Unit

## 5 – Forested Stands

Compartment: 031  
Year of Entry: 2013

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
148	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	5.1	90		
149	6113 - Lowland Maple	High Density Log	87.1	86		mostly lowland, but a few small upland ridges.
150	4112 - Maple, Beech, Cherry Association	High Density Log	14.5	80	81-110	decent quality. very humicky ground some nice red oak.
151	4319 - Mixed Upland Forest	High Density Log	5.1	84	51-80	
152	42260 - Natural Pine, Mixed Deciduous	Medium Density Log	6.9	80	1-50	
153	6112 - Lowland Aspen	High Density Pole	21.8	34		
155	6113 - Lowland Maple	Medium Density Log	46.9	86		Swampy/lowlands area around the headwaters of Dutchman creek.
156	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	5.7	86	51-80	headwaters of dutchman/bearcreek.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	3105 - Mixed Upland Herbaceous	2.9	No	Unspecified	
4	310 - Herbaceous Openland	1.6	N/A	Unspecified	
7	310 - Herbaceous Openland	2.0	N/A	Unspecified	
8	6229 - Mixed lowland shrub	7.3	No	Unspecified	flood plain clumps of alder and grasses.
21	3301 - Low Density Deciduous Tree	6.4	No	Unspecified	
23	3105 - Mixed Upland Herbaceous	1.1	No	Unspecified	
26	11 - Low Intensity Urban	1.4	No	Unspecified	active oil/gas well site
27	11 - Low Intensity Urban	1.3	N/A	Unspecified	
29	11 - Low Intensity Urban	1.1	No	Unspecified	active oil/gas well site.
30	3105 - Mixed Upland Herbaceous	1.4	No	Unspecified	
37	310 - Herbaceous Openland	1.9	N/A	Unspecified	
38	310 - Herbaceous Openland	1.6	N/A	Unspecified	
42	310 - Herbaceous Openland	8.6	N/A	Unspecified	
43	310 - Herbaceous Openland	2.3	N/A	Unspecified	
46	330 - Low-Density Trees	10.6	N/A	Unspecified	
47	11 - Low Intensity Urban	1.1	No	Unspecified	Active oil/gas well site.
48	11 - Low Intensity Urban	1.2	No	Unspecified	Active oil/gas well site.
51	310 - Herbaceous Openland	5.8	N/A	Unspecified	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
54	11 - Low Intensity Urban	1.3	No	Unspecified	active oil/gas well site.
55	310 - Herbaceous Openland	7.2	N/A	Unspecified	
56	310 - Herbaceous Openland	1.2	N/A	Unspecified	
57	310 - Herbaceous Openland	1.0	N/A	Unspecified	
60	11 - Low Intensity Urban	1.2	No	Unspecified	active oil/gas well site.
61	3105 - Mixed Upland Herbaceous	2.4	No	Unspecified	old abandoned railroad grade leading into Thompsonville.
65	310 - Herbaceous Openland	5.3	N/A	Unspecified	
66	122 - Road/Parking Lot	7.0	N/A	Unspecified	
71	310 - Herbaceous Openland	2.3	N/A	Unspecified	
73	310 - Herbaceous Openland	2.5	N/A	Unspecified	
75	11 - Low Intensity Urban	1.1	N/A	Unspecified	
76	6229 - Mixed lowland shrub	28.6	No	Unspecified	flood plain/ Betsie River Bottom land. Vegetation mostly alder bushes and grasses.
77	310 - Herbaceous Openland	7.1	N/A	Unspecified	
78	11 - Low Intensity Urban	2.1	N/A	Unspecified	active oil/gas well site.
79	310 - Herbaceous Openland	4.1	N/A	Unspecified	
82	6225 - Bog	3.8	N/A	Unspecified	
83	3105 - Mixed Upland Herbaceous	3.0	No	Unspecified	
84	3105 - Mixed Upland Herbaceous	1.5	No	Unspecified	old abandoned oil/gas well site.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
85	310 - Herbaceous Openland	9.7	N/A	Unspecified	
87	310 - Herbaceous Openland	1.3	N/A	Unspecified	
90	310 - Herbaceous Openland	1.7	N/A	Unspecified	
91	310 - Herbaceous Openland	1.4	N/A	Unspecified	
92	31021 - Cool Season Grass	6.8	Yes	Unspecified	wildlife division managed opening.
100	310 - Herbaceous Openland	2.1	N/A	Unspecified	
105	3102 - Grass	1.9	Natural Regen	Unspecified	
106	310 - Herbaceous Openland	1.1	N/A	Unspecified	
108	11 - Low Intensity Urban	1.9	No	Unspecified	Active oil/gas well site.
109	3105 - Mixed Upland Herbaceous	14.6	Natural Regen	Unspecified	
111	11 - Low Intensity Urban	1.8	No	Unspecified	Active oil/well site.
114	310 - Herbaceous Openland	2.7	No	Unspecified	old abandoned railroad grade
115	3301 - Low Density Deciduous Tree	1.6	No	Unspecified	
119	3303 - Mixed Low Density Trees	34.6	No	Unspecified	
121	3105 - Mixed Upland Herbaceous	15.7	No	Unspecified	cleared power line area along north edge of Lindey road. small drainage creek also running through the stand.
123	3102 - Grass	2.1	No	Unspecified	Active oil/gas well pad
124	790 - Other Bare/Sparsely Vegetate	33.7	Yes	Red Pine	This was a mature red pine stand that was clearcut recently and is now scheduled to be trenced and replanted to red pine.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
125	50 - Water	1.6	No	Unspecified	small pond with drainage creek coming in one end and flowing out other.
131	3301 - Low Density Deciduous Tree	3.2	No	Unspecified	
135	3105 - Mixed Upland Herbaceous	3.9	No	Unspecified	
140	3105 - Mixed Upland Herbaceous	1.0	No	Unspecified	
154	3105 - Mixed Upland Herbaceous	6.0	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.
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.