



# Compartment Review Presentation

## Sault Ste. Marie Forest Management Unit

Compartment 40

Entry Year 2015

Acreage: 886

County Chippewa

Management Area: Kincheloe Highlands

**Revision Date:** 07/09/2013

**Stand Examiner:** Jeffery Wise

### Legal Description:

T45N-R1W, Sections 18-21, 28-30, T45N-R2W, Section 24 & 25

### Identified Planning Goals:

Several red pine plantations planted in the early '60's need regular treatment by thinning. The red pine market is good and these stands have been prescribed for FDF funding. Other goals in this compartment include ORV and snowmobile trails as well as public event permits.

### Soil and topography:

The north part of this compartment is Markey-Kinross-Croswell association. It is a deep, poorly drained, mucky soil on outwash plains. The south part is Kalkaska-Rubicon association and is a deep, well drained, sandy soil on outwash plains and ground moraines. The landscape is gently rolling to flat.

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

The State of Michigan owns this strip of land south and west along the Gaines Highway. To the south is the Kincheloe subdivision and local township development projects, including a school, a Golf Course, and a recreation area around Dukes Lake. The compartment is highly used by the public for recreation purposes.

### Unique Natural Features:

No Unique Natural Features known.

### Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

### Special Management Designations or Considerations:

Visual management guidelines should be adhered to in this compartment due to the high recreation use and surrounding public land use on township holdings.

### Watershed and Fisheries Considerations:

Good. Kinross (McGinnis) Lake is a warm water lake containing panfish, largemouth bass, pike and bullheads, and supports a moderate fishery. Duke's Lake is a designated trout lake, supporting a very nice population of rainbow trout. Kinross Township uses Duke's Lake to designate a Children's Fishing Day each year in June, when they isolate a portion of the shoreline with nets, and plant about 500 10" rainbows for the children to catch. In addition, Little Munuscong River, just north of this compartment, is a designated trout stream, and there is potential for adverse impacts to it from unusual timber management activity in sections 19 & 20.

Fisheries-based comments for the compartments in the Eastern Lake Superior Management Unit are presented below for your consideration. As always, best management practices should be applied when working in proximity to surface water.

COMPARTMENT 40 (T45N, R2W, Section 24)

Fisheries Values: Minimal

Fisheries Concerns: The very immediate headwaters of Hutton Creek (branch of the East Branch of the South Branch Waiska River) begin near the center of this compartment (section). Also located in this compartment is Mud Lake which drains to Hutton Creek. It appears as though there is little groundwater input in this section suggesting limited suitability for brook trout. Hutton Creek is a designated trout stream. No prescribed treatments are scheduled in this portion of the compartment, so Fisheries has no concerns at this time.

### Wildlife Habitat Considerations:

Compartment 40 is part of the Kincheloe Highlands Management Area and is primarily located between Gaines Highway and Kincheloe. Red pine plantations are common on sandy soils on the east side. Aspen and lowland conifer habitats are common in the north. Past wildlife objectives included creating age and structural diversity and early successional aspen habitat. Young aspen stands resulting from treatment since the last entry are present adjacent to Gaines Highway, while

stands with older aspen are south of that. The western portion of the compartment, just east of I-75, is dominated by marsh.

Wildlife objectives for the next ten years include maintaining aspen in varying age classes and encouraging diversity within pine stands. No treatments are planned within aspen stands for this entry cycle. In pine stands, Oak, maple, and other non-target species will be left where possible in where thinnings occur to diversify these stands, and management will favor some larger trees on the landscape to encourage use by some birds including blackburnian warblers. Other species benefitting include black bear, deer, ruffed grouse, woodcock, snowshoe hare, bobcat, coyote, and a number of small migratory birds.

### **Mineral Resource and Development Concerns and/or Restrictions**

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium, lacustrine (lake) sand and gravel and coarse-textured glacial till. There is insufficient data to determine the glacial drift thickness. The Ordovician Utica and Collingwood Shales and Trenton Group subcrop below the glacial drift. The Trenton is used for stone/dolomite elsewhere in the UP. Gravel pits are located in this area and potential appears to be good. There is no economic oil and gas production in the UP. A well was drilled for oil and gas just north of the compartment, but was a dry hole.

### **Vehicle Access:**

There is good access to this compartment from Gaines Highway and several two tracks. The entire compartment is easily accessible.

### **Survey Needs:**

Nothing needed at this time.

### **Recreational Facilities and Opportunities:**

Several developed trails are located within this compartment, including the Kinross Motorcycle trail, and snowmobile trails 494, 472 and 49. Unless absolutely necessary for winter logging, avoid the groomed snowmobile trails during the grooming season. If ORV markers are placed on "cut" trees, cut the trees above the ORV markers, if at all possible.

ORV trails abound in this compartment. The snowmobile trail is also a part of the public use here. There is limited hunting due to the proximity of the residential area, the school, and the correctional facility nearby. Dukes Lake, although owned by the township, provides swimming and fishing to local residents. There are no facilities on State land.

### **Fire Protection:**

Good access and lakes nearby give this compartment good fire protection.

### **Additional Compartment Information:**

#### **The following reports from the Inventory are attached:**

- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

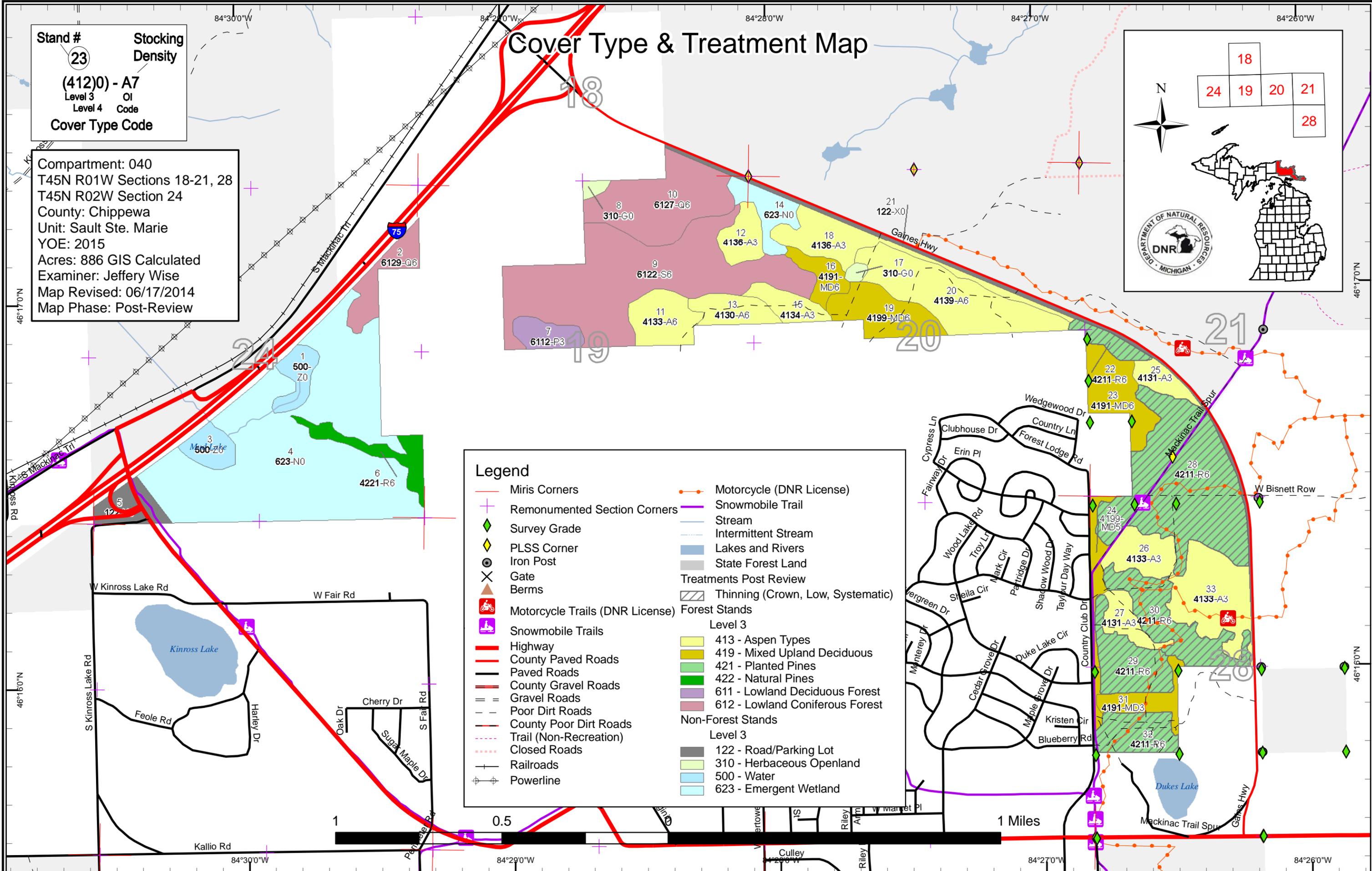
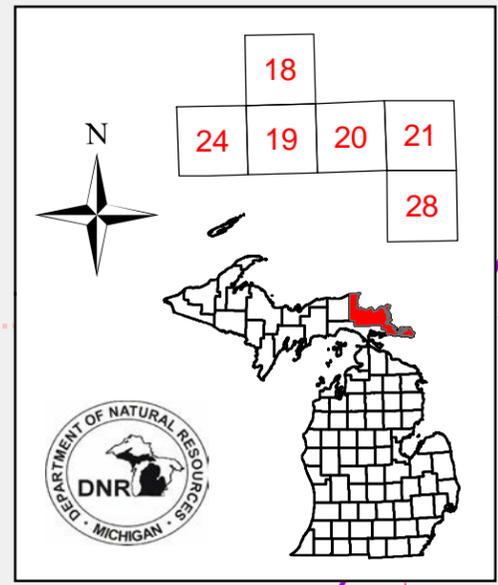
#### **The following information is displayed, where pertinent, on the attached compartment maps:**

- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatment Map

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

Compartment: 040  
 T45N R01W Sections 18-21, 28  
 T45N R02W Section 24  
 County: Chippewa  
 Unit: Sault Ste. Marie  
 YOY: 2015  
 Acres: 886 GIS Calculated  
 Examiner: Jeffery Wise  
 Map Revised: 06/17/2014  
 Map Phase: Post-Review



### Legend

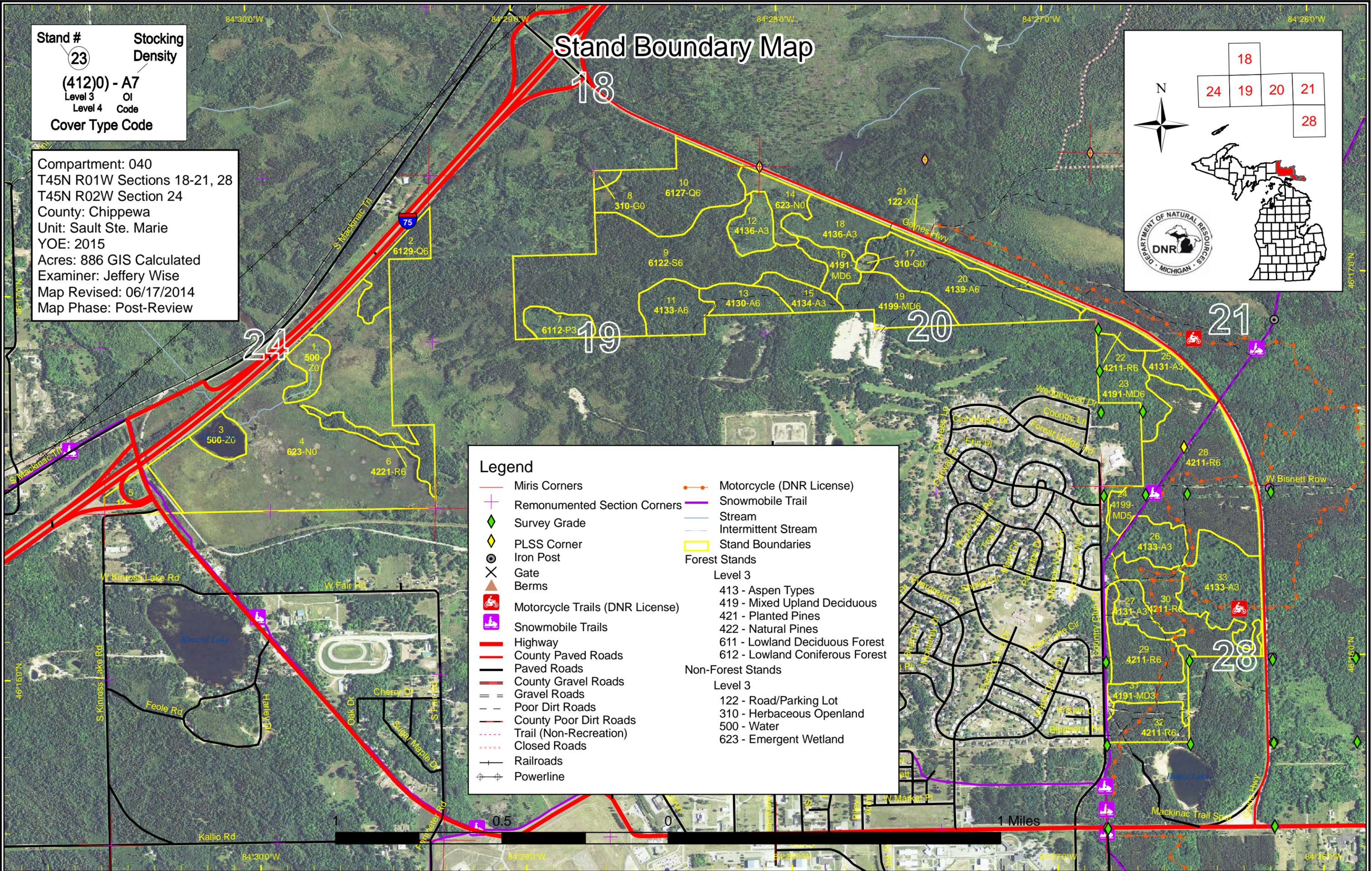
—+—	Miris Corners	—●—	Motorcycle (DNR License)
—+—	Remonumented Section Corners	—●—	Snowmobile Trail
◆	Survey Grade	—	Stream
◆	PLSS Corner	—	Intermittent Stream
⊙	Iron Post	—	Lakes and Rivers
×	Gate	—	State Forest Land
▲	Berms	—	Treatments Post Review
🏍️	Motorcycle Trails (DNR License)	▨	Thinning (Crown, Low, Systematic)
🛷	Snowmobile Trails	<b>Forest Stands</b>	
—	Highway	Level 3	
—	County Paved Roads	■	413 - Aspen Types
—	Paved Roads	■	419 - Mixed Upland Deciduous
—	County Gravel Roads	■	421 - Planted Pines
—	Gravel Roads	■	422 - Natural Pines
—	Poor Dirt Roads	■	611 - Lowland Deciduous Forest
—	County Poor Dirt Roads	■	612 - Lowland Coniferous Forest
—	Trail (Non-Recreation)	<b>Non-Forest Stands</b>	
—	Closed Roads	Level 3	
—	Railroads	■	122 - Road/Parking Lot
—	Powerline	■	310 - Herbaceous Openland
		■	500 - Water
		■	623 - Emergent Wetland



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

Compartment: 040  
 T45N R01W Sections 18-21, 28  
 T45N R02W Section 24  
 County: Chippewa  
 Unit: Sault Ste. Marie  
 YOY: 2015  
 Acres: 886 GIS Calculated  
 Examiner: Jeffery Wise  
 Map Revised: 06/17/2014  
 Map Phase: Post-Review

# Stand Boundary Map



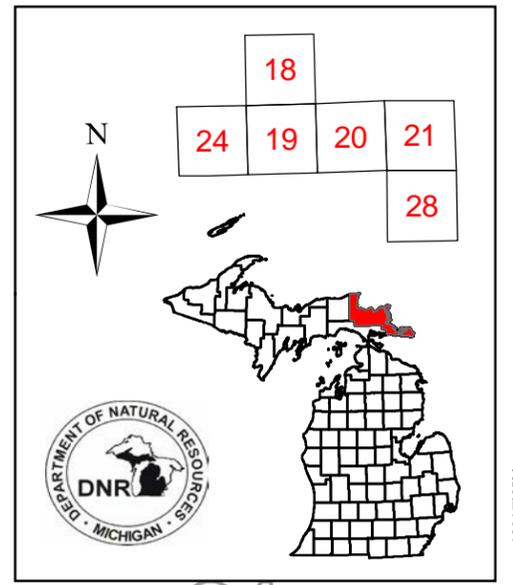
### Legend

	Miris Corners		Motorcycle (DNR License)
	Remonumented Section Corners		Snowmobile Trail
	Survey Grade		Stream
	PLSS Corner		Intermittent Stream
	Iron Post		Stand Boundaries
	Gate	<b>Forest Stands</b>	
	Berms	Level 3	
	Motorcycle Trails (DNR License)	413 - Aspen Types	
	Snowmobile Trails	419 - Mixed Upland Deciduous	
	Highway	421 - Planted Pines	
	County Paved Roads	422 - Natural Pines	
	Paved Roads	611 - Lowland Deciduous Forest	
	County Gravel Roads	612 - Lowland Coniferous Forest	
	Gravel Roads	<b>Non-Forest Stands</b>	
	Poor Dirt Roads	Level 3	
	County Poor Dirt Roads	122 - Road/Parking Lot	
	Trail (Non-Recreation)	310 - Herbaceous Openland	
	Closed Roads	500 - Water	
	Railroads	623 - Emergent Wetland	
	Powerline		

# Special Conservation Areas & Site Conditions Map

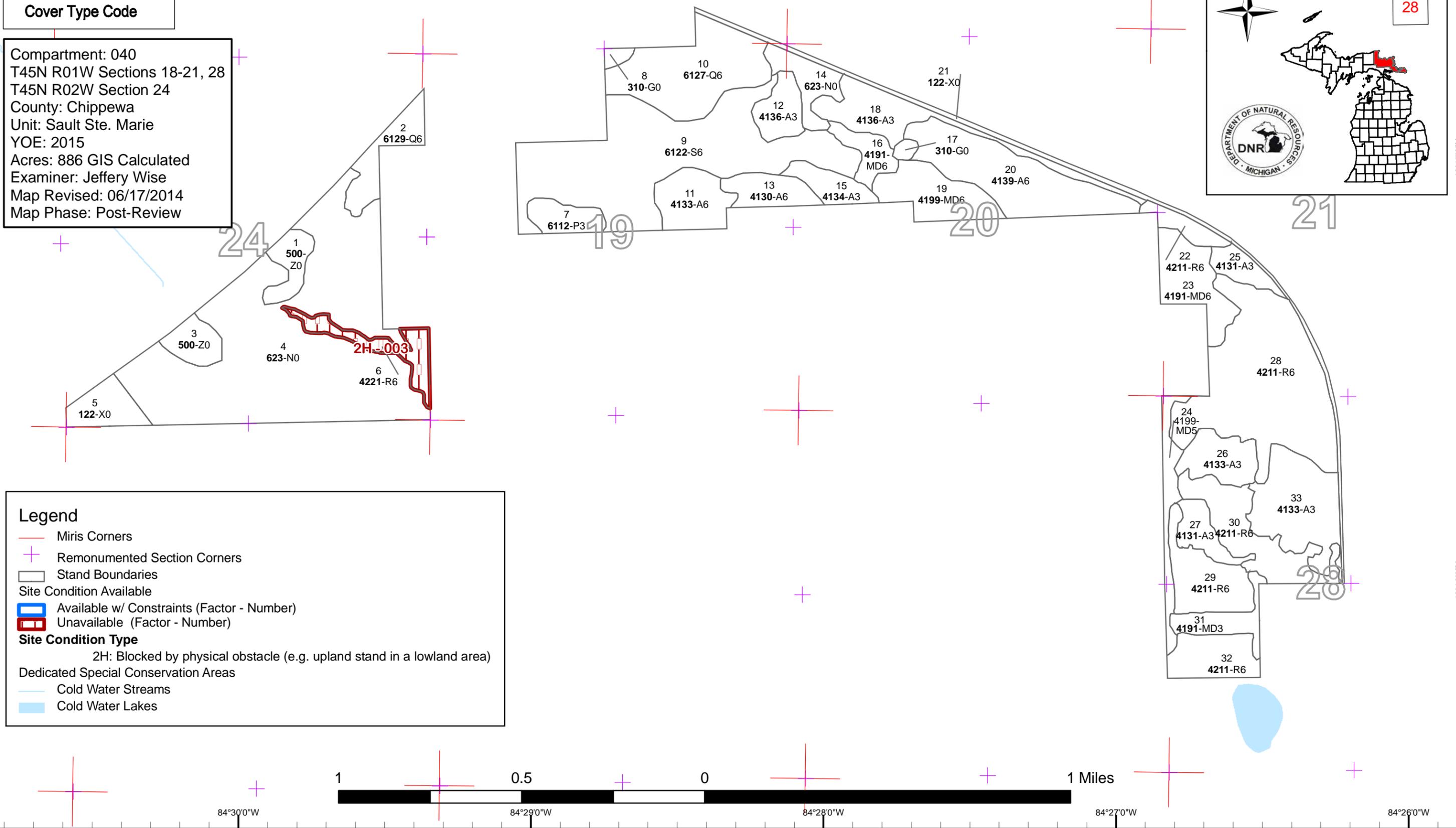
Stand # **23** Stocking Density  
**(412)0 - A7**  
 Level 3 OI  
 Level 4 Code  
**Cover Type Code**

Compartment: 040  
 T45N R01W Sections 18-21, 28  
 T45N R02W Section 24  
 County: Chippewa  
 Unit: Sault Ste. Marie  
 YOE: 2015  
 Acres: 886 GIS Calculated  
 Examiner: Jeffery Wise  
 Map Revised: 06/17/2014  
 Map Phase: Post-Review



**Legend**

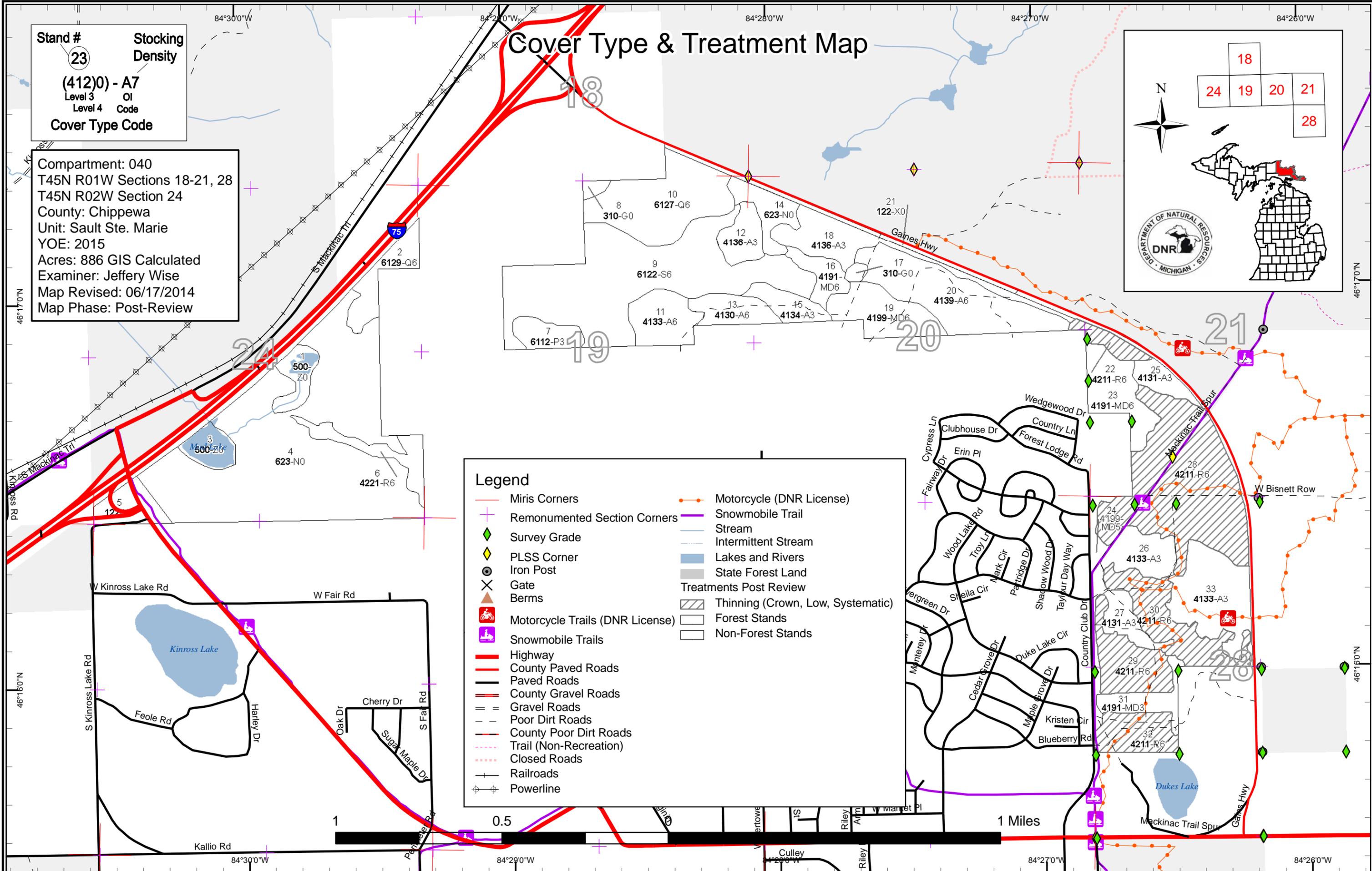
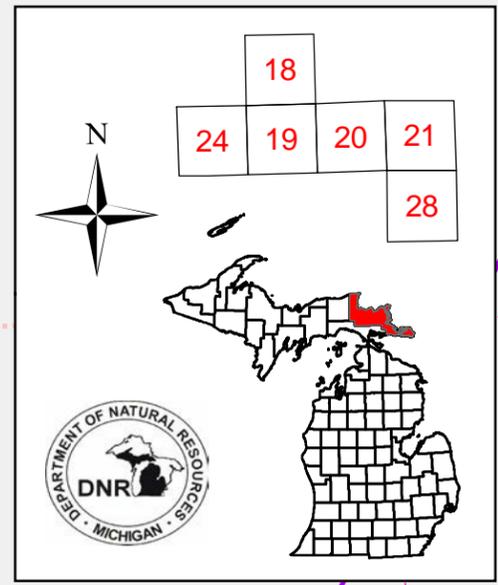
- Miris Corners
- Remonumented Section Corners
- Stand Boundaries
- Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)
- Site Condition Type**
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- Dedicated Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes



# Cover Type & Treatment Map

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

Compartment: 040  
T45N R01W Sections 18-21, 28  
T45N R02W Section 24  
County: Chippewa  
Unit: Sault Ste. Marie  
YOE: 2015  
Acres: 886 GIS Calculated  
Examiner: Jeffery Wise  
Map Revised: 06/17/2014  
Map Phase: Post-Review



### Legend

Miris Corners	Motorcycle (DNR License)
Remonumented Section Corners	Snowmobile Trail
Survey Grade	Stream
PLSS Corner	Lakes and Rivers
Iron Post	State Forest Land
Gate	<b>Treatments Post Review</b>
Berms	Thinning (Crown, Low, Systematic)
Motorcycle Trails (DNR License)	Forest Stands
Snowmobile Trails	Non-Forest Stands
Highway	
County Paved Roads	
Paved Roads	
County Gravel Roads	
Gravel Roads	
Poor Dirt Roads	
County Poor Dirt Roads	
Trail (Non-Recreation)	
Closed Roads	
Railroads	
Powerline	



Map coordinates: 84°30'0"W, 84°28'0"W, 84°27'0"W, 84°26'0"W, 46°17'0"N, 46°16'0"N, 46°15'0"N

Report 1 – Total Acres by Cover Type and Age Class



	Age Class													Total	
	0-9	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	75	26	98	0	0	0	0	0	0	0	0	0	0	0	199
Herbaceous Openland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Lowland Aspen/Balsam Poplar	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Conifers	0	0	0	0	0	47	0	15	0	0	0	0	0	0	62
Lowland Spruce/Fir	0	0	0	0	0	0	0	110	0	0	0	0	0	0	110
Marsh	191	0	0	0	0	0	0	0	0	0	0	0	0	0	191
Mixed Upland Deciduous	0	0	11	0	0	36	0	0	10	0	22	0	0	0	79
Red Pine	0	0	0	0	0	166	0	0	0	0	14	0	0	0	179
Urban	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Water	20	0	0	0	0	0	0	0	0	0	0	0	0	0	20
<b>Total</b>	<b>330</b>	<b>26</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>249</b>	<b>0</b>	<b>126</b>	<b>10</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>886</b>



## Report 2 – Proposed Treatment Summaries

Sault Ste. Marie Mgt. Unit  
Year of Entry 2015

Compartment 040  
Total Compartment Acres: 886

### Acres by Treatment Type

Commercial Harvest - 166    Tree Planting - 0    Other - 0  
Habitat Cut - 0    Opening Maintenance - 0

### Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Planted Pines	0	0	0	0	166	0	166
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>166</b>	<b>0</b>	<b>166</b>



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
22	45040022-Cut	7.1	42110 - Planted Red Pine	High Density Pole	53	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete

Prescription Mark red pine to 120 basal area and cut no other species except for operational safety.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014

28	45040028-Cut	88.3	42110 - Planted Red Pine	High Density Pole	53	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete
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Prescription Mark red pine to 120 basal area and cut no other species except for operational safety.

Specs:

Other

Comments: A 66 foot easement has been granted to Mascoma by the State of Michigan for water, sewer, gas, and electricity along the east-west road

through this stand.

Next

Steps:

Proposed

Start Date: 10/01/2014

29	45040029-Cut	22.9	42110 - Planted Red Pine	High Density Pole	55	141-170	Harvest	Systematic Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete
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Prescription Thin and release red pine by removing every third row, leave other species where possible.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014

30	45040030-Cut	30.0	42110 - Planted Red Pine	High Density Pole	53	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete
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Prescription Mark red pine to 120 basal area and cut no other species except for operational safety.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
32 45040032-Cut	17.7	42110 - Planted Red Pine	High Density Pole	53	141-170	Harvest	Systematic Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete

Prescription Thin and release red pine by removing every third row, leave other species where possible.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014

**Total Treatment  
Acreage Proposed: 165.9**



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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#Type! #Type!

Prescription  
Specs:

Other  
Comment:

Next  
Steps:

Proposed  
Start Date: #Type!

Limiting Factor

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**Total Treatment**  
**Acreage Proposed: 0.0**

## Report 5 – Site Conditions

Sault Ste. Marie Mgt. Unit

Jeffery Wise : Examiner

Compartment 040

Year of Entry 2015

### Availability for Management

Total Acres	Acres		Dominant Site Conditions	No		2H	
	Available	Not Available					
199	199		<b>Aspen</b>	199			
10	10		<b>Lowland Aspen/Balsam Poplar</b>	10			
62	62		<b>Lowland Conifers</b>	62			
110	110		<b>Lowland Spruce/Fir</b>	110			
79	79		<b>Mixed Upland Deciduous</b>	79			
179	166	14	<b>Red Pine</b>	166			14
640	627	14	Total Forested Acres	627			14
	98%	2%	Relative Percent				

*\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
003	Not Available	<b>2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)</b>	14	2B: Unknown if access through adjacent landowner(s) is possible	2E: Road needed	2I: Survey needed	
<b>Comments:</b> Virtually inaccessible.							



### Report 6 – 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.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
<b>Comments</b>				

**Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS**

\* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

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

<b>Conservation Area</b>	<b>Type</b>	<b>Description</b>
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	6129 - Mixed Coniferous Lowland Forest	High Density Pole	15.1	78		
6	42210 - Natural Red Pine	High Density Pole	13.5	108		
7	6112 - Lowland Aspen	High Density Sapling	10.0	7		Fully stocked regeneration.
9	6122 - Black Spruce	High Density Pole	110.4	71		Boggy in areas,
10	6127 - Lowland Pine	High Density Pole	47.2	53		Thick with white pine poles and black spruce, many wet, boggy areas.
11	4133 - Aspen, Mixed Pine	High Density Pole	18.7	26		Was part of stands 13 and 15, contains more white pine reserves from previous harvest.
12	4136 - Aspen, Mixed Conifer	High Density Sapling	11.6	7		Fully stocked regeneration.
13	4130 - Aspen	High Density Pole	12.7	26		Was part of stand 11 and 15, but has very little conifers.
15	4134 - Aspen, Spruce/Fir	High Density Sapling	10.3	26		Was part of 11 and 13 but has more balsam fir, less pine.
16	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	9.8	83	51-80	Looks the same as stand 18 except it contains spruce and balsam, good potential for nice red maple in time.
18	4136 - Aspen, Mixed Conifer	High Density Sapling	26.0	7		Fully stocked regeneration.
19	4199 - Other Mixed Upland Deciduous	High Density Pole	23.5	53	51-80	Potential for good red maple.
20	4139 - Aspen, Mixed Deciduous	High Density Pole	48.3	26		Looks like it was an opening at one time, pole sugar maples are limby, reserved when cut along with some oak probably.
22	42110 - Planted Red Pine	High Density Pole	7.1	53	111-140	
23	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	22.4	101	81-110	
24	4199 - Other Mixed Upland Deciduous	Medium Density Pole	12.1	51		Was open at one time, filling in with oak aspen and otherspecies, contains part of the snow trail.
25	4131 - Aspen, Oak	High Density Sapling	8.2	28		Regen good, a small buffer stand left along the road, left when this was cut, was cut six years ago, too small for mapping standards.

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Sault Ste. Marie Mgt. Unit

## Report 8 – Forested Stands

Compartment: 040  
Year of Entry: 2015

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
<b>26</b>	4133 - Aspen, Mixed Pine	High Density Sapling	15.9	15		Two aged, probably from leave trees when it was cut, enough BA to record canopy sp.
<b>27</b>	4131 - Aspen, Oak	High Density Sapling	10.2	14		Parts fully stocked, some areas open, and other parts look as though they were not cut or left as residual, too small for separate stands.
<b>28</b>	42110 - Planted Red Pine	High Density Pole	88.3	53	111-140	Contains snowmobile and ORV trails.
<b>29</b>	42110 - Planted Red Pine	High Density Pole	22.9	55	141-170	Contains ORV trail.
<b>30</b>	42110 - Planted Red Pine	High Density Pole	30.0	53	111-140	Contains ORV trail.
<b>31</b>	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	11.4	21		Was typed as upland brush in OI, filling in with many species.
<b>32</b>	42110 - Planted Red Pine	High Density Pole	17.7	53	141-170	Contains ORV trail.
<b>33</b>	4133 - Aspen, Mixed Pine	High Density Sapling	36.9	7		Enough residual oak to record as two aged.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	50 - Water	10.1	Unspecified	Unspecified	
3	50 - Water	9.9	Unspecified	Unspecified	
4	6239 - Mixed Emergent Wetland	177.9	Unspecified	Unspecified	
5	122 - Road/Parking Lot	13.0	Unspecified	Unspecified	
8	310 - Herbaceous Openland	2.2	Unspecified	Unspecified	
14	6239 - Mixed Emergent Wetland	13.0	Unspecified	Unspecified	
17	310 - Herbaceous Openland	1.9	Unspecified	Unspecified	
21	122 - Road/Parking Lot	17.5	Unspecified	Unspecified	