



Sault Forest Management Unit
Compartment Review Presentation
Compartment #120 **Entry Year: 2013**
Compartment Acreage: 1,893 **County: Mackinac**

Revision Date: July 20, 2011

Stand Examiner: Matthew Edison

Legal Description: T42N R7W SECTIONS 1, 2, 10, 11, 12, 13 Hendricks Township

RMU (if applicable): Lake Michigan Shoreline

Management Goals: The compartment is located in the Epoufette area with U.S. Highway 2 running through it. Timber management will be varied across the compartment. Selection harvest of mature northern hardwoods will bring stands into regulation. There will also be clear-cut and replanting treatments in a single mature red pine stand, as well as the second thinning of a red pine stand to release the tight crowns. There are also some smaller treatments proposed for mixed aspen/spruce fir stands to promote regeneration and reclaim some open land that is filling in. Garlic Mustard eradication projects will also be ongoing within the compartment.

Soil and Topography: This compartment is composed almost entirely of Wallace Sands (0-6%) slope. The area along the *Manitou Paymen Highbanks* is (35-60%) slope. There are small areas of Spot-Finch complex soils (0-6%) slope. The vast majority of the compartment is flat to gently rolling terrain with the steep *Manitou Paymen Highbanks* escarpment immediately south of U.S.-2 being the exception.

Ownership Patterns, Development, and Land Use in and Around the Compartment: There are several private holdings (approx. 480 acres) within this compartment. These holdings are mostly in contiguous blocks of 120-160 acres with the exception of one isolated 40 acre piece and one 5 acre holding along the Lake shore. There are small private holdings along US-2 in the adjacent compartment to the West and some private holdings to the East with the majority owned by Sand Products Inc.

Unique, Natural Features: River Gorge in Section 12. Northern Mesic forest associated with gorge includes stand 46 (M6). Potential for rare plants of rich mesic forests throughout compartment. There is Potential for red-shouldered hawk, eagle, osprey and goshawk.

Archeological, Historical, and Cultural Features: There are remains of an old logging camp in stand 420. The Cut River Bridge (1947) is one of only two cantilevered deck truss bridges in Michigan and spans 641' across the Cut River Gorge. Both gas and oil pipelines and maintained ROW's pass through this compartment. Sand Products, a sand mining operation is located adjacent to the East of the compartment.

Special Management Designations or Considerations: There are stands in this compartment designated as "potential old growth" in 1992. These stands are along the Lake Michigan shoreline and the Cut River gorge. Garlic Mustard treatments are taking place in several stands that are known to be infested.

Watershed and Fisheries Considerations: Fisheries Values

Good. The Cut Creek system up on the “plain” is SQCW. The streams flowing southwesterly in Section 6, one from the lake in the northeast, are also SQCW. Fisheries Division, however, does not actively manage these streams. Please leave enough setback to minimize damage or potential damage to the river. All cutting should be designed to minimize the area’s desirability to beaver, such as possibly cutting to convert the stream corridor to coniferous species. From Lake Michigan inland under the US-2 bridge, anglers target steelhead. A potential mitigation project by the sand company immediately east of the river is to place roughly an acre of rock rubble in Lake Michigan immediately in front of the Cut River outflow. The project will attract more steelhead and salmon, as well as anglers. For that reason, extra care should be taken to not cause sand erosion upstream. Current flow will move any new sand downstream and potentially cover that new rock rubble.

Wildlife Habitat Considerations: Compartment 120 is located around the Cut River in Mackinac County. It lies within the St. Ignace subsection of the Niagaran Escarpment and Lake Plain. Northern hardwoods on sandy soils dominate the majority of the compartment, although some lowland cedar exists along the Lake Michigan shoreline in the southwest corner. Over 2 ½ miles of Lake Michigan shoreline form the southern boundary of the compartment. The shoreline area provides habitat for geese and other waterfowl. The mouth of the Cut River as well as the Cut River gorge are located on the southeastern side. A steep escarpment is located just inland of the shoreline, and hardwoods dominate from the escarpment to the northern compartment boundary. American beech is a significant component to stands here, but beech bark disease has caused a high mortality rate to these trees. Also, garlic mustard, a non-native invasive plant species, was found in two locations in this compartment. Control efforts have been implemented in both of these locations.

Wildlife objectives for this compartment include maintaining diversity in northern hardwood stands, protecting shoreline and riparian habitats, controlling the spread of invasive species, and protecting rare species. Healthy beech will be retained where present. Conifers will also be retained in hardwood stands. Snags and coarse woody debris will be left to provide habitat for cavity nesters and small animals. Tree planting may occur to replace the source of hard mast and the diversity lost from the beech die-off. Control of garlic mustard will continue as resources are available. Other wildlife benefitting from this management include white-tailed deer, black bear, coyote, fox, broad-winged and other hawks, thrushes, and warblers.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel. The glacial drift thickness varies between 50 and 100 feet. The Silurian Engadine Group subgroups below the glacial drift. The Engadine is quarried for stone/limestone elsewhere in the UP. The nearest gravel pit is located in Section 12. There appears to be some gravel potential in the compartment. There is no economic oil and gas production in the UP.

Vehicle Access: Vehicle access is very good throughout this compartment. Hiawatha Trail (all season Rd.) runs North/South and represents the West boundary of the compartment. U.S. Highway 2 (Class A Rd.) runs East/West across the southern portion of the compartment. Prout Road runs along the north and east boundaries of the compartment and is designated as a Good quality dirt road and serves as a groomed snowmobile trail. There are two timber bridges on Prout Road. These bridges are rated for truck traffic. The Cut River Road (paved county Rd.) makes up the majority of the southern half of the East Boundary. The Cut River Road also runs East/West across the middle of the compartment. There are two pipelines with two tracks within ROWs that run East/ West across the entire compartment. There are numerous two tracks running off the pipelines and Boundary roads. These two tracks offer access into most areas of the interior of the compartment. There is a DNR gate located on the two-track leading from Cut River Rd. to an old township dumpsite (stand 420). All new roads created during harvesting will be closed following use.

Survey Needs: None this entry.

Recreational Facilities and Opportunities: The compartment has abundant recreational opportunities. The Cut River Bridge is a sight seeing location and offers roadside parks and foot trails along the Cut River down to the Beach. This park is used heavily by US-2 traffic during the summer/ fall vacation seasons. Extensive areas of invasive exotic Garlic Mustard are found throughout these parks, especially along the high use foot trails. A groomed snowmobile trail winds throughout the compartment offering winter recreational use. Deer and grouse hunters are also very active in this compartment. Fishing (steelhead) is popular along the Cut River and at the mouth (see fisheries comments).

Fire Protection: There is some potential for fire in this compartment with the pine components. Ignition sources are present with extensive recreational use and road accessibility into the stand. The relatively sandy soils (except south of US-2) do not create any special mop-up considerations. Hendricks Township VFD Hall is located in this compartment. There is excellent road accessibility throughout the stand (with the exception of the area south of US-2). Pipelines run across entire compartment and may require special operational considerations during a fire.

Additional Compartment Information: None

- **The following reports from the Inventory are attached:**
 - ◆ **Total Acres by Cover Type and Age Class**
 - ◆ **Proposed Treatment Summary**
 - ◆ **Proposed Treatments – No Limiting Factors**
 - ◆ **Proposed Treatments – With Limiting Factors**
 - ◆ **Stand Details (Forested and Nonforested)**
 - ◆ **Dedicated and Proposed Special Conservation Areas**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand boundaries, cover types, and numbers**
 - ◆ **Proposed treatments**
 - ◆ **Details on the road access system**

Cover Type & Treatment Map

Compartment 120
 T42N, R07W, Sec. 1, 2, 10-13
 County: Mackinac
 Unit: Sault Ste Marie
 YOY: 2013
 Acres: 1,893 GIS Calculated
 Stand Examiner: Matthew Edison
 Map Revised: 8/15/2011
 Map Phase: Pre-Review

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

Legend

- Miris Corners
- Remonumented Section Corners
- Pipelines
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Snowmobile Trail
- Intermittent Stream/Drain
- Stream

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Other Treatment - See Comments

Forest Stands

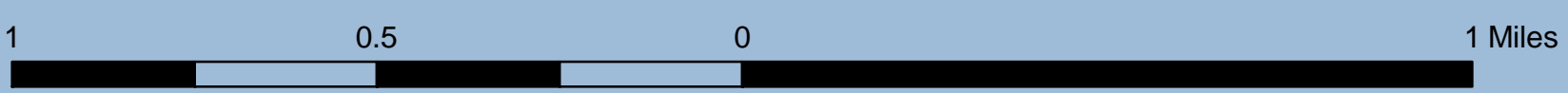
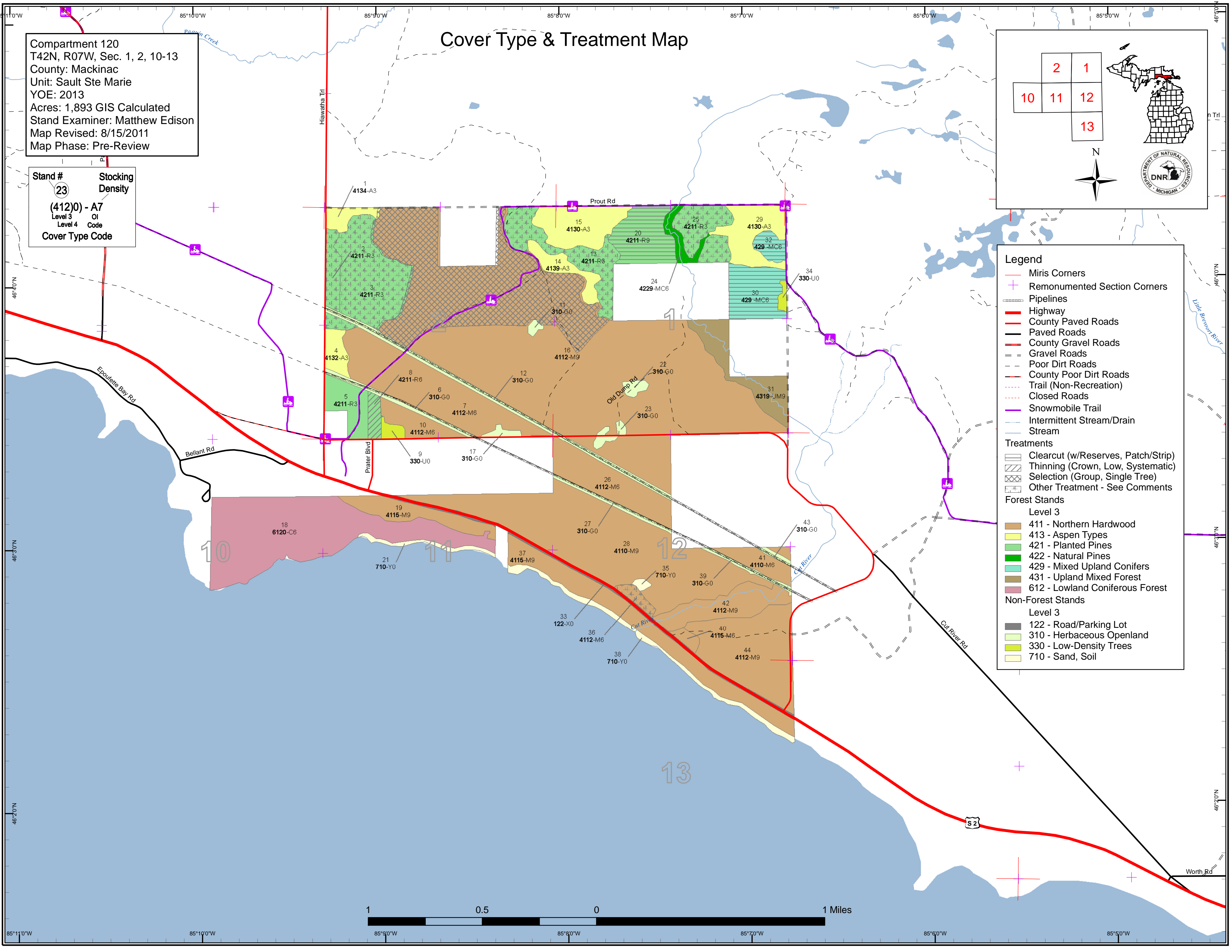
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 710 - Sand, Soil



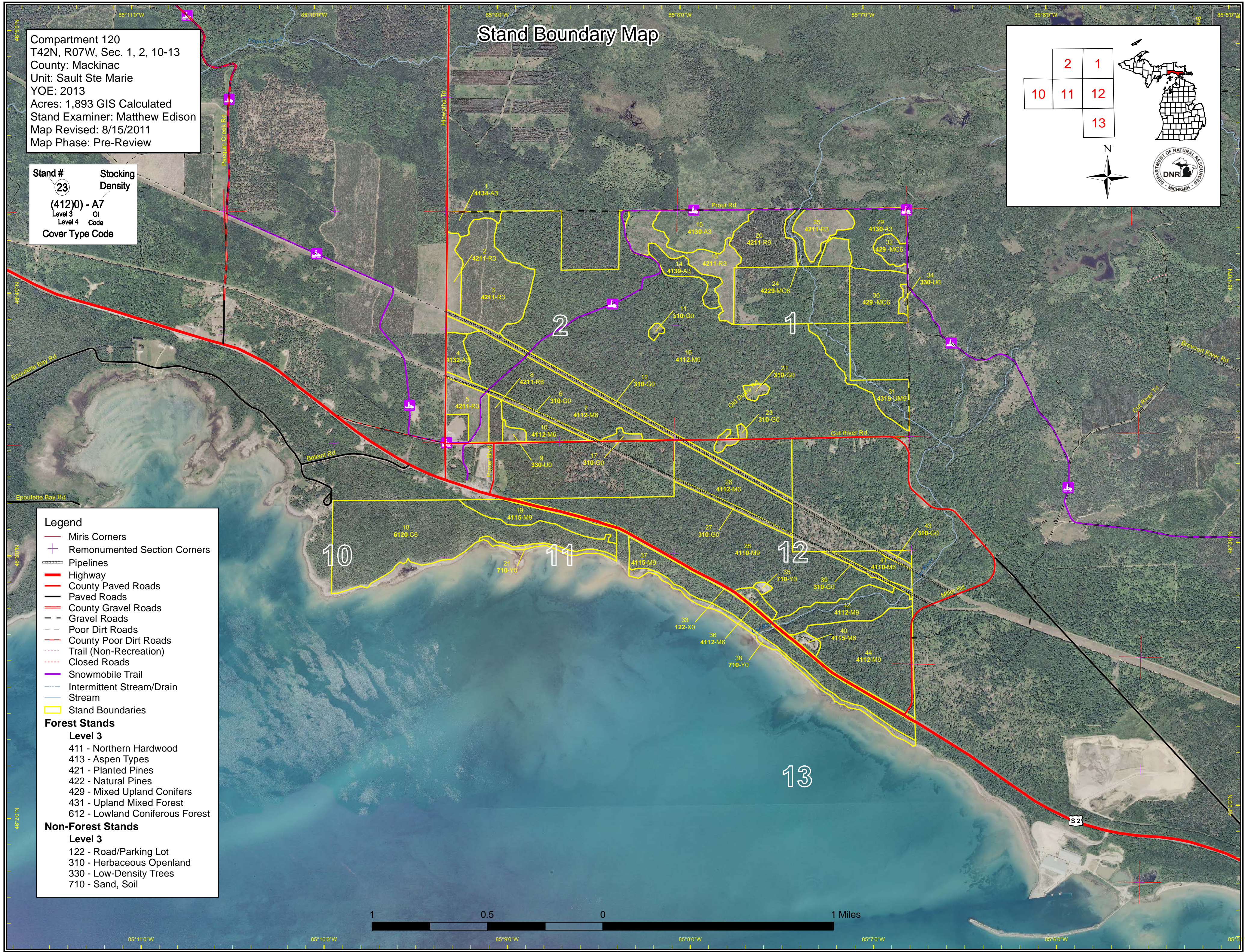
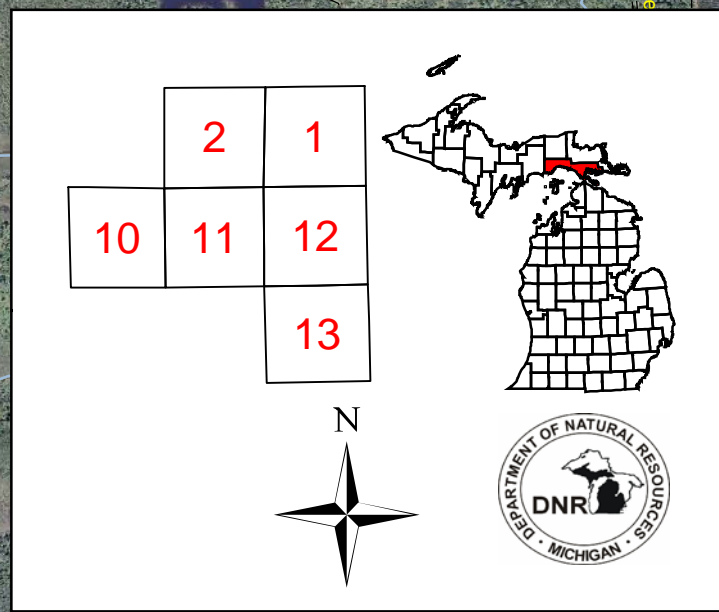
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46°3'0"N 46°2'0"N 46°1'0"N

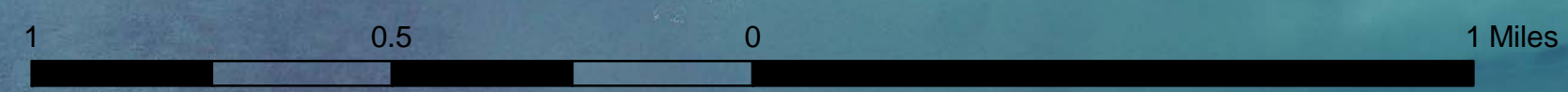
Stand Boundary Map

Compartment 120
 T42N, R07W, Sec. 1, 2, 10-13
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Stand #
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Stocking Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



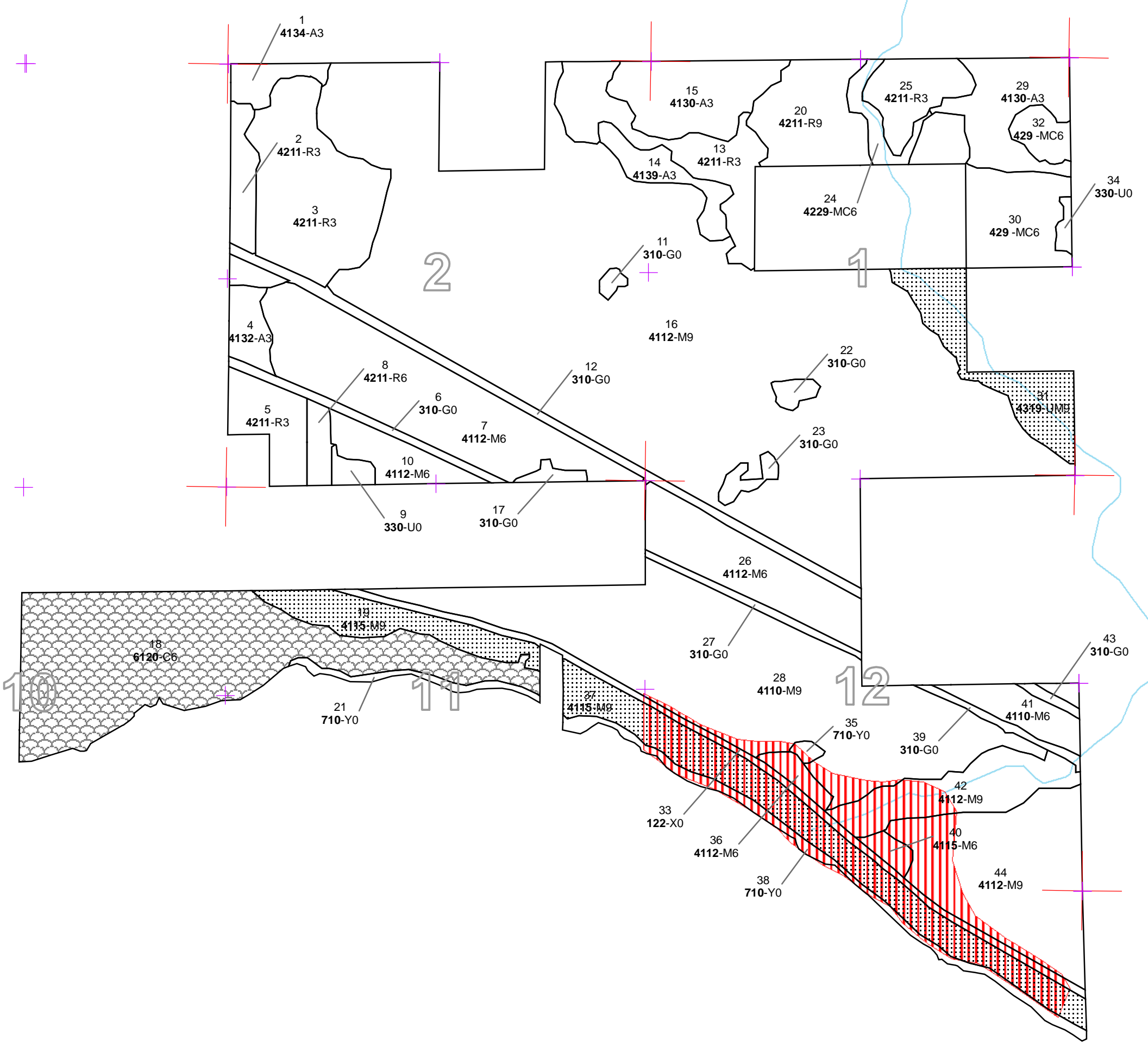
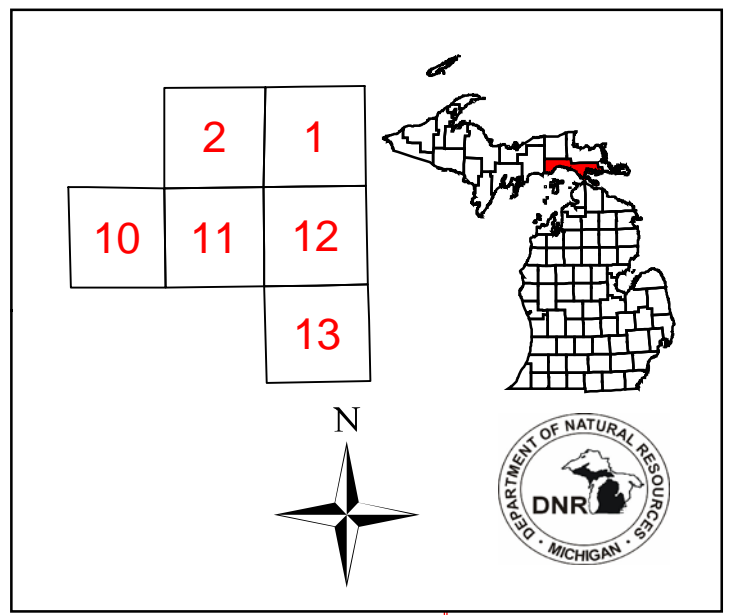
- Legend**
- Miris Corners
 - ✚ Remonumented Section Corners
 - Pipelines
 - Highway
 - County Paved Roads
 - Paved Roads
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 - Stand Boundaries
- Forest Stands**
- Level 3**
- 411 - Northern Hardwood
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- Non-Forest Stands**
- Level 3**
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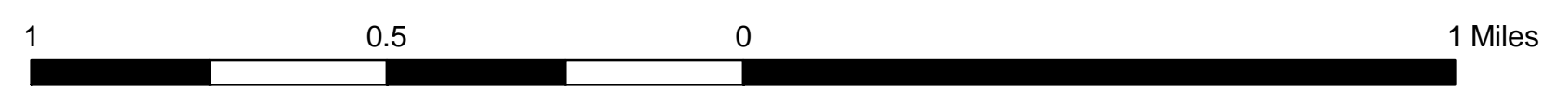
Dedicated & Proposed Special Conservation Area Map

Compartment 120
 T42N, R07W, Sec. 1, 2, 10-13
 County: Mackinac
 Unit: Sault Ste Marie
 YOE: 2013
 Acres: 1,893 GIS Calculated
 Stand Examiner: Matthew Edison
 Map Revised: 8/15/2011
 Map Phase: Pre-Review

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



- Legend**
- Miris Corners
 - ⊕ Remonumented Section Corners
 - Stand Boundaries
 - Proposed Special Conservation Areas**
 - ▨ SCA - Special Conservation Area
 - ▩ SCA Removal
 - Dedicated Special Conservation Areas**
 - Ecological Reference Areas
 - Coastal Environmental Areas
 - ▨ Mineral Resource Polygon
 - ▨ Visual Management Areas
 - Cold Water Streams
 - Deer Wintering Areas
 - Great Lakes Islands
 - Forest Stands**
 - Level 3**
 - 411 - Northern Hardwood
 - 413 - Aspen Types
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 429 - Mixed Upland Conifers
 - 431 - Upland Mixed Forest
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85°11'0"W 85°10'0"W 85°9'0"W 85°8'0"W 85°7'0"W 85°6'0"W

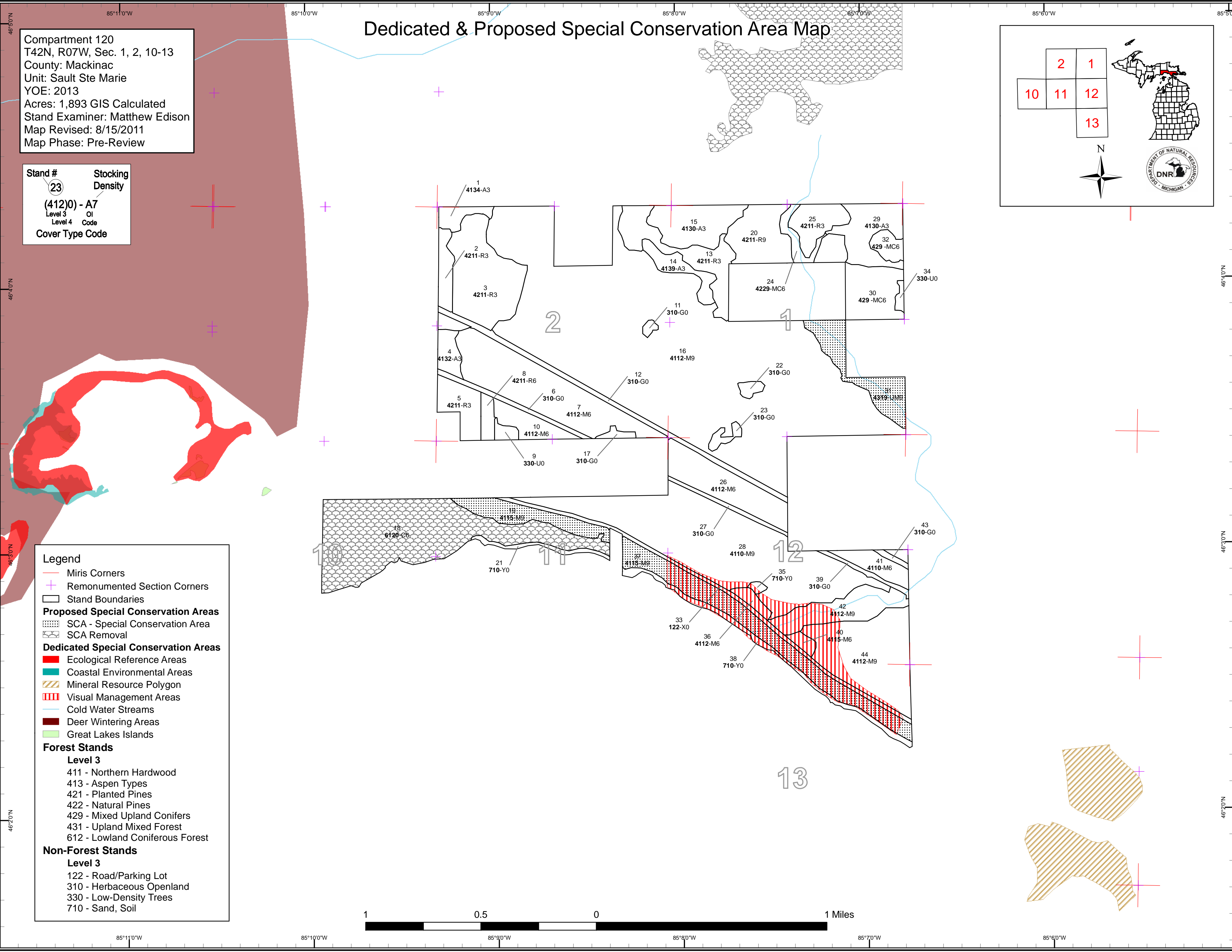


Table 1 – Total Acres by Cover Type and Age Class



	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	0	39	71	0	0	0	0	0	0	0	0	0	0	0	110
Cedar	0	0	0	0	0	0	0	0	0	0	0	155	0	0	0	155
Herbaceous Openland	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
Low-Density Trees	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Natural Mixed Pines	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9
Northern Hardwood	0	0	0	0	0	66	202	691	239	0	0	0	0	0	0	1199
Red Pine	0	112	70	0	0	0	7	37	0	0	0	0	0	0	0	226
Sand, Soil	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Upland Conifers	0	0	0	0	0	9	35	0	0	0	0	0	0	0	0	44
Upland Mixed Forest	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	35
Urban	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Total	115	112	108	71	0	9	101	209	738	274	0	155	0	0	0	1893



Table 2 – Proposed Treatment Summaries

Sault Ste. Marie Mgt. Unit
Year of Entry 2013

Compartment 120
Total Compartment Acres: 1893

Acres by Treatment Type

Commercial Harvest - 293	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 165
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
Northern Hardwood	0	204	0	0	0	0	0	204
Red Pine	37	0	0	0	7	0	0	45
Upland Conifers	44	0	0	0	0	0	0	44
Total	82	204	0	0	7	0	0	293



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
8	45120008-Cut	7.3	42110 - Planted Red Pine	High Density Pole	62	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Second thin to release tight crowns spacing. Thin to approximate basal area range of 120-140. <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next</u> <u>Steps:</u>									
16	45120016-Cut	204.4	4112 - Maple, Beech, Cherry Association	High Density Log	77	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription</u> Mark stand to 80 to 90 Basal Area. Retain some beech with the smooth bark if present and wildlife trees. Leave some conifer if present. Some <u>Specs:</u> larger canopy gaps may be desirable around the cherry and yellow birch if possible to regenerate those species and enhance the advanced regeneration present. Open up the drip line of the hemlock if present. Do not cut any white pine if present. WLD: Leave all conifers and 2-5 beech per acre (leave any healthy trees). Plant oak and/or possibly hemlock or disease resistant beech if available. Leave snags and coarse woody debris. <u>Other</u> <u>Comments:</u> <u>Next</u> --Matthew Edison : 08/01/2011 comments: <u>Steps:</u> Plant Oak (bigger tree) where possible - per WLD --Matthew Edison : 08/01/2011 comments: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white spruce, black spruce and white pine.									
20	45120020-Cut	37.5	42110 - Planted Red Pine	High Density Log	73	Harvest	Clearcut	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Clearcut stand with no retention of live trees except for witness trees. Standing trees within the stand after harvest create a hazard for aerial <u>Specs:</u> spraying of the stand for release and pest management. <u>Other</u> <u>Comments:</u> <u>Next</u> Burn, trench, and plant as required to regenerate to red pine. <u>Steps:</u>									
30	45120030-Cut	34.8	429 - Mixed Upland Conifers	High Density Pole	55	Harvest	Clearcut with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
<u>Prescription</u> Clear cut with reserves . Chip to re-establish grown in open areas. Leave some scattered white pine and spruce. <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is any mix of aspen, maple, cherry, cedar, <u>Steps:</u> yellow and paper birch, balsam fir, white spruce, black spruce and white pine.									
32	45120032-Cut	9.3	429 - Mixed Upland Conifers	High Density Pole	41	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Clear-cut with reserves. Leave scattered representative species and some better quality white pine. <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is any mix of aspen, maple, cherry, cedar, <u>Steps:</u> yellow and paper birch, balsam fir, white spruce, black spruce and white pine.									

**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
2	45120002- Other	17.0	42110 - Planted Red Pine	High Density Sapling	9	Other	Unspecified	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Monitor for saw-fly and treat by herbicide application if needed per work instructions.

Specs:

Other

Comments:

Next

Steps:

3	45120003- Other	69.8	42110 - Planted Red Pine	High Density Sapling	14	Other	Unspecified	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Monitor for saw fly and treat as needed. Spray according to work instructions.

Specs:

Other

Comments:

Next

Steps:

13	45120013- Other	41.5	42110 - Planted Red Pine	High Density Sapling	9	Other	Unspecified	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Monitor for saw fly and treat as needed. Spray according to work instructions.

Specs:

Other

Comments:

Next

Steps:

25	45120025- Other	31.0	42110 - Planted Red Pine	High Density Sapling	9	Other	Unspecified	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Monitor for saw fly and treat as needed. Spray according to work instructions.

Specs:

Other

Comments:

Next

Steps:

36	45120036- Other	5.9	4112 - Maple, Beech, Cherry Association	High Density Pole	77	Other	Unspecified	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
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Prescription Garlic Mustard treatments continuing by MDOT and other cooperators.

Specs:

Other

Comments:

Next

Steps:

**Total Treatment
Acreage Proposed: 458.3**

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

**Out of YOE -- Treatments
Prescribed with No Limiting Factor**

Year of Entry: 2013



Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
45158_OutOfY OE-Cut	2.5				Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription:</u> Mark stand to 80 to 90 Basal Area. Retain some beech with the smooth bark and wildlife trees. Some larger canopy gaps may be desirable to enhance the advanced regeneration present. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, beech, yellow and paper birch, ironwood, balsam fir, white spruce, black spruce and white pine.								
NF_45134015- NonFor	4.7	Unspecified		0	Non-Forest Management	Patch or Strip Clearcut	31021 - Cool Season Grass	Cmpt. Review Proposal
<u>Prescription:</u> Treat with C149 s 63. Opening maintenance removing jack pine seedlings and saplings. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u>								
Total Treatment Acreage Proposed:		7.2						



Stand	Sault Ste. Marie Mgt. Unit			5 – Forested Stands		Compartment: 120 Year of Entry: 2013	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
1	4134 - Aspen, Spruce/Fir	High Density Sapling	9.6	28		Aspen regen with mix of balsam and red maple. Cut in '83.	
2	42110 - Planted Red Pine	High Density Sapling	17.0	9		Planted in '02.	
3	42110 - Planted Red Pine	High Density Sapling	69.8	14		Planted in '97	
4	4132 - Aspen, Jack Pine	High Density Sapling	11.2	21	111-140	Stand cut in '80. Small diameter aspen with mix of jack pine scattered throughout. hood and treat with stand across rd. in adjacent compartment.	
5	42110 - Planted Red Pine	High Density Sapling	22.2	9	141-170	Cc in '99, planted in '02	
7	4112 - Maple, Beech, Cherry Association	High Density Pole	96.8	63	81-110	Stand was thinned last entry. Losing beech fast. Will result in lower basal area. Check in 10 years.	
8	42110 - Planted Red Pine	High Density Pole	7.3	62	141-170	Thinned in '94	
10	4112 - Maple, Beech, Cherry Association	High Density Pole	18.5	66	81-110	Stand was thinned in '03. Only a few beech remain. A few pockets of scattered aspen.	
13	42110 - Planted Red Pine	High Density Sapling	41.5	9		Planted in '02. 10-15' tall r.p. looks good	
14	4139 - Aspen, Mixed Deciduous	High Density Sapling	15.4	25	111-140	Clear cut in 1986. Mixed aspen and hardwood regen. with scattered larger hardwood.	
15	4130 - Aspen	High Density Sapling	38.6	10		Cut in '01. Good looking aspen regen.	
16	4112 - Maple, Beech, Cherry Association	High Density Log	584.3	77	111-140	Two separate parts of this stand were thinned last entry. Previously three separate stands. Center portion is garlic mustard infested area that was previously prescribed burned for control. Control continues via hand, chemical, and mechanical methods.	
18	6120 - Lowland Cedar	High Density Pole	154.6	103	81-110	Lowland cedar at base of very steep escarpment along u.s. highway 2. Nice looking cedar in most places. Very wet in some areas and dominated by tag alder. Mix of spruce, balsam, scrub red maple and some birch. Nominated as old growth in	
19	4115 - Y.Birch, Hemlock NH	High Density Log	28.7	79	81-110	Stand is on face of Manitou-Paymen highbanks escarpment south of u.s. 2. No operability here, period. Proposed as old growth in '92. Unique site, very mature trees.	
20	42110 - Planted Red Pine	High Density Log	37.5	73	141-170	Mature red pine with pockets of spruce and aspen scattered throughout.	

S t a n d	Sault Ste. Marie Mgt. Unit		5 – Forested Stands			Compartment: 120	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
24	42290 - Natural Mixed Pine	High Density Pole	9.0	70	111-140		Stand is mix of everything with large red pine left from plantation. Stand is cut river corridor buffer.
25	42110 - Planted Red Pine	High Density Sapling	31.0	9			Clear cut in '01, planted in '02.
26	4112 - Maple, Beech, Cherry Association	High Density Pole	48.5	55	51-80		Thinned last entry. Low basal areas due to loss of beech. More red maple in this stand vs. surrounding. Some very big holes created by loss of beech.
28	4110 - Sugar Maple Association	High Density Log	201.8	80	51-80		Stand was thinned last entry. Almost all the beech has died out at this point. Basal areas low where beech is gone. Very thick advanced maple and beech regen.
29	4130 - Aspen	High Density Sapling	35.2	21			Aspen regen with mix of spruce and balsam, and scattered white pine residual.
30	429 - Mixed Upland Conifers	High Density Pole	34.8	55	81-110		Highly variable stand of mixed spruce and balsam, aspen, white pine. Some areas of lower basal area.
31	4319 - Mixed Upland Forest	High Density Log	35.2	86	111-140		Stand is small steep gorge along cut river corridor. Nominated as proposed old growth in '92
32	429 - Mixed Upland Conifers	High Density Pole	9.3	41	111-140		Stand is variable mix of very poor quality white pine and balsam and spruce and a few scattered aspen.
36	4112 - Maple, Beech, Cherry Association	High Density Pole	5.9	77	81-110		Stand is MDOT roadside park at cut river (west side).
37	4115 - Y.Birch, Hemlock NH	High Density Log	68.1	79	81-110		Stand is located on steep escarpment (Manitou-Paymen highbanks) south of u.s. 2. Mature trees. Proposed as old growth in '92. Stand contains area adjacent to the MDOT roadside park at cut river. Garlic mustard exists on the steep slope in this area.
40	4115 - Y.Birch, Hemlock NH	High Density Pole	4.5	70	81-110		Stand is MDOT roadside park (east side) at cut river. Large hemlock on steep gorge along river corridor. Beech is los. Some white pine.
41	4110 - Sugar Maple Association	High Density Pole	18.0	51	51-80		Low basal areas after thinning and loss of beech. Mainly pole stand now.
42	4112 - Maple, Beech, Cherry Association	High Density Log	37.3	85	81-110		Stand is mix of mature maple and beech with areas of hemlock and a few scattered yellow birch and white pine. Lower basal areas due to loss of beech. Stand is steep bank buffer portion along cut river corridor.
44	4112 - Maple, Beech, Cherry Association	High Density Log	86.9	67	51-80		Stand was thinned in '97. Almost all the beech has been decimated by bbd and is gone, creating some large holes in the canopy and lower basal area. Garlic mustard is along the old road that enters off cut river road.





Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
6	3102 - Grass	9.0	No	Low (NonForested)	R.O.W.
9	3303 - Mixed Low Density Trees	4.3	No	Low (NonForested)	
11	3102 - Grass	2.0	No	Low (NonForested)	
12	3102 - Grass	23.9	No	Low (NonForested)	R.O.W.
17	3102 - Grass	3.2	No	Low (NonForested)	
21	710 - Sand, Soil	6.4	No	Low (NonForested)	
22	3102 - Grass	3.8	No	Low (NonForested)	
23	3102 - Grass	4.8	No	Low (NonForested)	
27	3102 - Grass	6.2	No	Low (NonForested)	R.O.W.
33	122 - Road/Parking Lot	20.7	No	Low (NonForested)	
34	3302 - Low Density Conifer Trees	2.6	No	Low (NonForested)	
35	710 - Sand, Soil	1.8	No	Low (NonForested)	Bare sand....
38	710 - Sand, Soil	18.8	No	Low (NonForested)	Lake Michigan shoreline/ beach.
39	3102 - Grass	4.9	No	Low (NonForested)	R.O.W.
43	3102 - Grass	2.2	No	Low (NonForested)	R.O.W.



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
18	SCA Removal	45120018	154.6	Does not meet Old Growth characteristics criteria. 103 year old cedar mixed with tag alder, etc. Proposed as Old Growth in 1992. Not a unique site - SCA. Recommend removing from old growth.
19	Unique Site - SCA	45120019	28.7	Steep Manitou-Paymen Highbanks.....proposed as old-growth in 1992. Unique, very steep, high escarpment along shoreline. There are very large, old white pine and hemlock and some yellow birch on the steep slope. Recommend for SCA.
31	Unique Site - SCA	45120031	35.2	Was listed as potential old growth in 1992. Stand is unique river corridor, which is quite steep in areas. There are large Hemlock and White Pine with understory mix that are on the inoperable sides of the gorge. Wide flood plain along bottom in parts.
37	Unique Site - SCA	45120037	68.1	Steep Manitou-Paymen Highbanks.....proposed as old-growth in 1992. Unique, very steep, high escarpment along shoreline. There are very large, old white pine and hemlock and some yellow birch on the steep slope. Recommend for SCA.



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	Great Lakes Islands	Great Lakes Islands provide significant habitat for numerous species, including many rare plants and animals, several of which are endemic or largely restricted to the Great Lakes region. Due to their isolation, islands provide good examples of many Great Lakes-associated natural communities and ecosystems, and thus have potential to provide insights for understanding the consequences of human disturbance on the increasingly fragmented ecosystems of the mainland.
SCA	Visual Management Area	An area of general social appreciation that is managed to recognize and preserve a particular visual value. Examples of these areas include scenic vistas, scenic or natural beauty roads, and lakeshore areas.