



Compartment Review Presentation

Sault Ste. Marie Forest Management Unit

Compartment 165

Entry Year 2015

Acreage: 2,037

County Mackinac

Management Area: Mackinac Mix

Revision Date: 07/01/2013

Stand Examiner: Josh Brinks

Legal Description:

T44N-R8W, Sections 30 - 32 and T44N-R9W, Section 25

Identified Planning Goals:

The compartment is located just north of the town of Garnet. Primary cover types include lowland brush, a large bog complex, swamp conifers, black spruce, and small ridges of white birch. The higher portions of the compartment (section 32 and center of section 25) contain areas of aspen, northern hardwoods, and some hemlock. A substantial amount of the management recommended has accessibility problems due to low ground and private land issues. However the compartment needs continued scale of management. The grassy opening off N. Black River Road in Section 32 had been under a use permit for grazing for several years, from the mid-1940's to at least the mid-1970's.

Soil and topography:

The majority of the compartment is low, level ground, ridges and potholes, consisting of Finch-Dawson-Pullup complex and Markey-Spot-Finch complex with some small steep ridges of Pullup fine sand. It gradiates into Markey and Carbondale mucks north of section 30. Section 32 is level to rolling ground consisting of Wallace-Alcona complex and Battydoe fine sandy loam with areas of losco sand and Wallace-Spot complex.

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

State of Michigan lands border this compartment on the north, west and east, while private land holdings border the compartment to the south (mostly in 40 to 80 acre parcels). Logging had been limited by crossing the several private landowners and by a weight restricted bridge over Bark Creek. The private landowners had been hoping the DNR would rebuild the bridge for them, but finally had it rebuilt themselves in the late 1990's. Whether or not permission will be granted to access state lands for harvesting activities remains to be seen.

Unique Natural Features:

Black River and Bark Creek transect the compartment running from north to south. King's Marsh lies within the compartment. Cranberry Lake bog lies to the northwest.

Archeological, Historical, and Cultural Features:

There are known concerns within the compartment. All proposed management activities have taken these concerns into consideration.

Special Management Designations or Considerations:

Will need to work with private landowners to gain access to many stands over the Bark Creek bridge and along Black River. Appropriate buffers will be left along Black River, and tributaries, if access is obtained to these stands.

Watershed and Fisheries Considerations:

The upper reaches of the Black River are found within this compartment. This river system supports a diverse trout community and is an important stream for migratory salmonids such as steelhead. Summer water temperatures are very good with temperatures typically in the low 60s. Maintaining this habitat and water quality (groundwater) is critical for the fish community in the Black River watershed. These streams are also important in that they support natural reproduction of Lake Michigan adfluvial fishes such as steelhead. Implementation of BMP's that will aid in preventing sediment input from road crossings and upland areas are critically important to protect spawning areas for stream-resident fishes. Buffering the river is also critical to ensure future inputs of woody material to the stream channel and provide shading to protect water temperature from warming to a degree that will inhibit trout survival.

Wildlife Habitat Considerations:

This compartment lies within the Mackinac Mix Management Area and is dominated by lowland forest types. Black spruce, tamarack, cedar, and white pine are common. Some lowland deciduous stands exist on the west side where red maple, birch, and aspen are common. The southeast portion contains stands of aspen of varying age classes and in various mixes with other species. King's Marsh is also located in this area. Species use of the compartment include, but is not

limited to, white-tailed deer, snowshoe hare, bobcat, coyote, beaver, otter, mink, ruffed grouse, some waterfowl and raptors, and numerous small migratory birds. Wildlife objectives include maintaining much of the lowland habitat for snowshoe hare, bobcat, beaver, and otter, and encouraging some additional early successional habitat to support deer, hare, and ruffed grouse.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine (lake) sand and gravel and peat and muck. There is insufficient data to determine the glacial drift thickness. The Silurian Engadine and Manistique Groups subcrop below the glacial drift. The Engadine is quarried for stone/limestone elsewhere in the UP. Gravel pits are located to the east and there appears to be some gravel potential. There is no economic oil and gas production in the UP.

Vehicle Access:

Primary access to the compartment is via the Borgstrom Road along the eastern boundary and N. Black River Road running along the southern boundary of the compartment. H-40 (Hiawatha Trail) cuts the southeast corner of the compartment. Access to sections other than section 32 is poor. The poor dirt two-track across Bark Creek accesses the private land holdings prior to entering state land. After entering state land, it is pretty much impassable. Access into section 25 west of Black River is non-existent.

Survey Needs:

No survey needs at this time.

Recreational Facilities and Opportunities:

There are no developed recreation facilities within this compartment. While access is limited, fishing and hunting would be the primary activities. Some mushroom, berry picking and nature viewing opportunities exist too.

Fire Protection:

The majority of the compartment is within one of the zone dispatch areas within the Naubinway area. While the potential for fire exists, much of the area is lower ground with high ridges running through it. Access would be difficult in many areas because of lack of roads, and Black River transecting the compartment.

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

Compartment: 165
 T44N R08W Sections 30-32
 T44N R09W Section 25
 County: Mackinac
 Unit: Sault Ste. Marie
 YOE: 2015
 Acres: 2,037 GIS Calculated
 Examiner: Josh Brinks
 Map Revised: 06/24/2014
 Map Phase: Post-Review

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

Legend

- Miris Corners
- Remonumented Section Corners
- Survey Grade
- PLSS Corner
- Unclassified Corners
- GPS Point
- Berms
- Snowmobile Trails
- 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
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments Post Review

- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)
- Other Harvest - See Comments
- Treatments w/ Site Condition

Forest Stands

Level 3

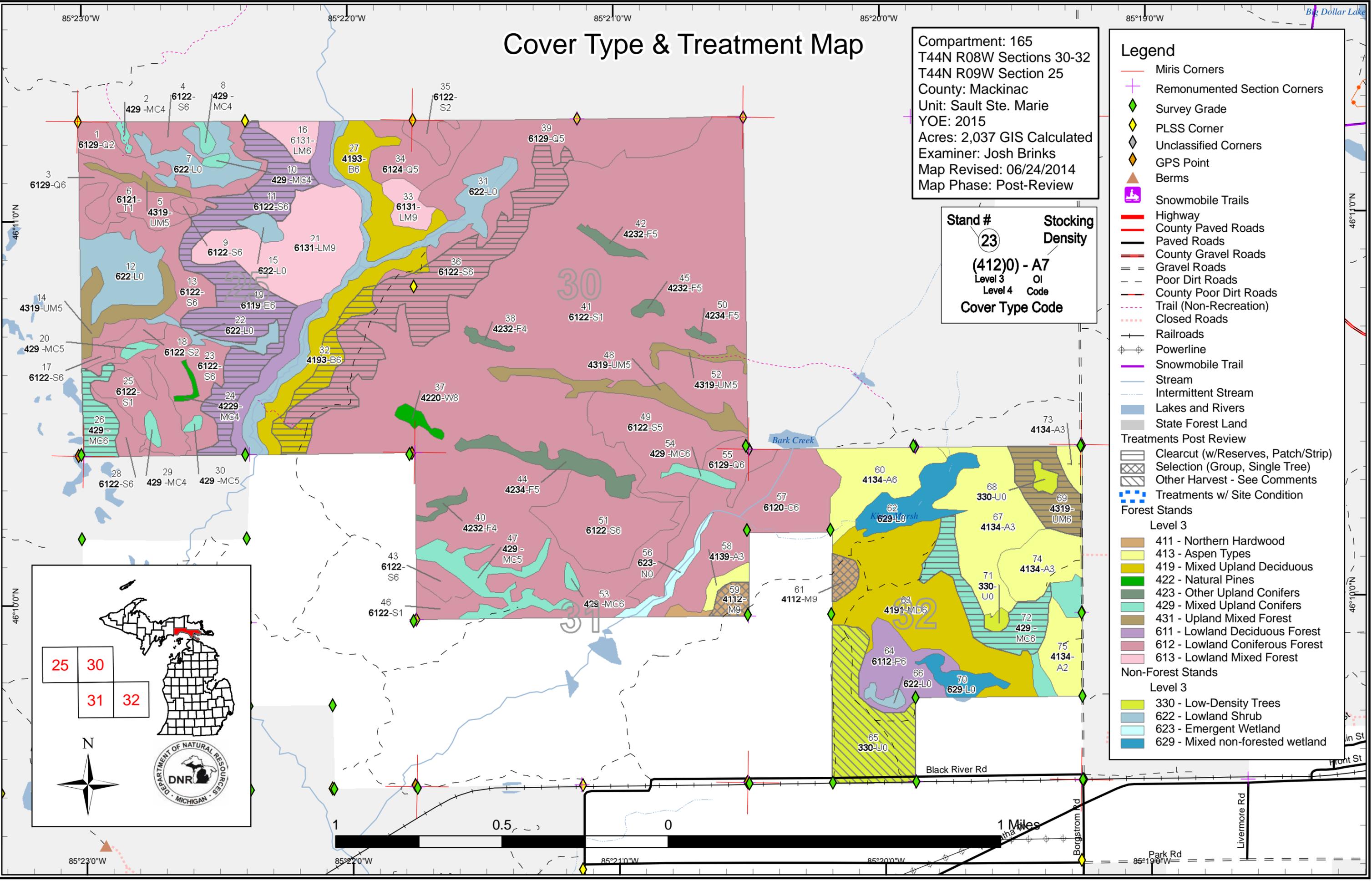
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland

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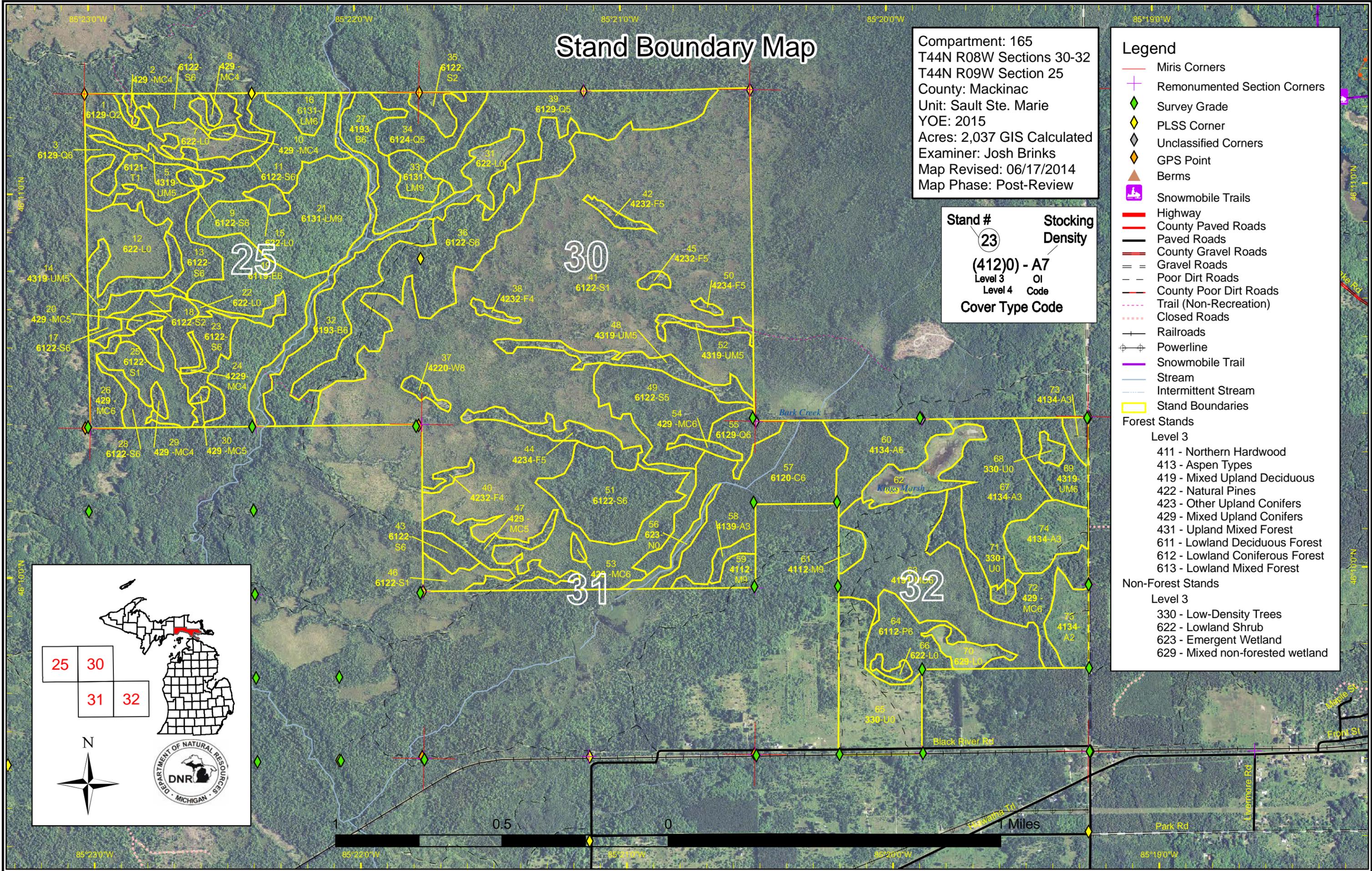
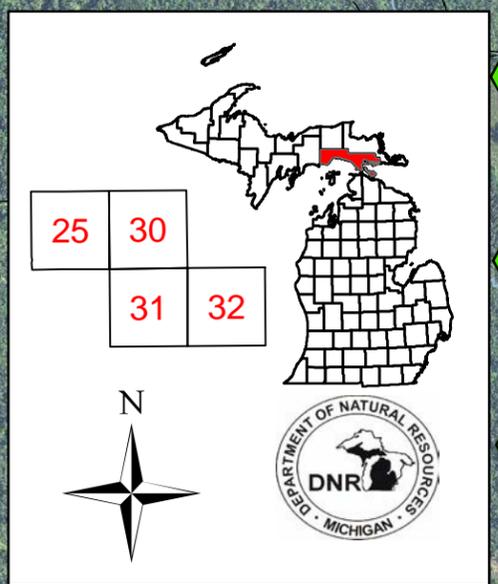


Stand Boundary Map

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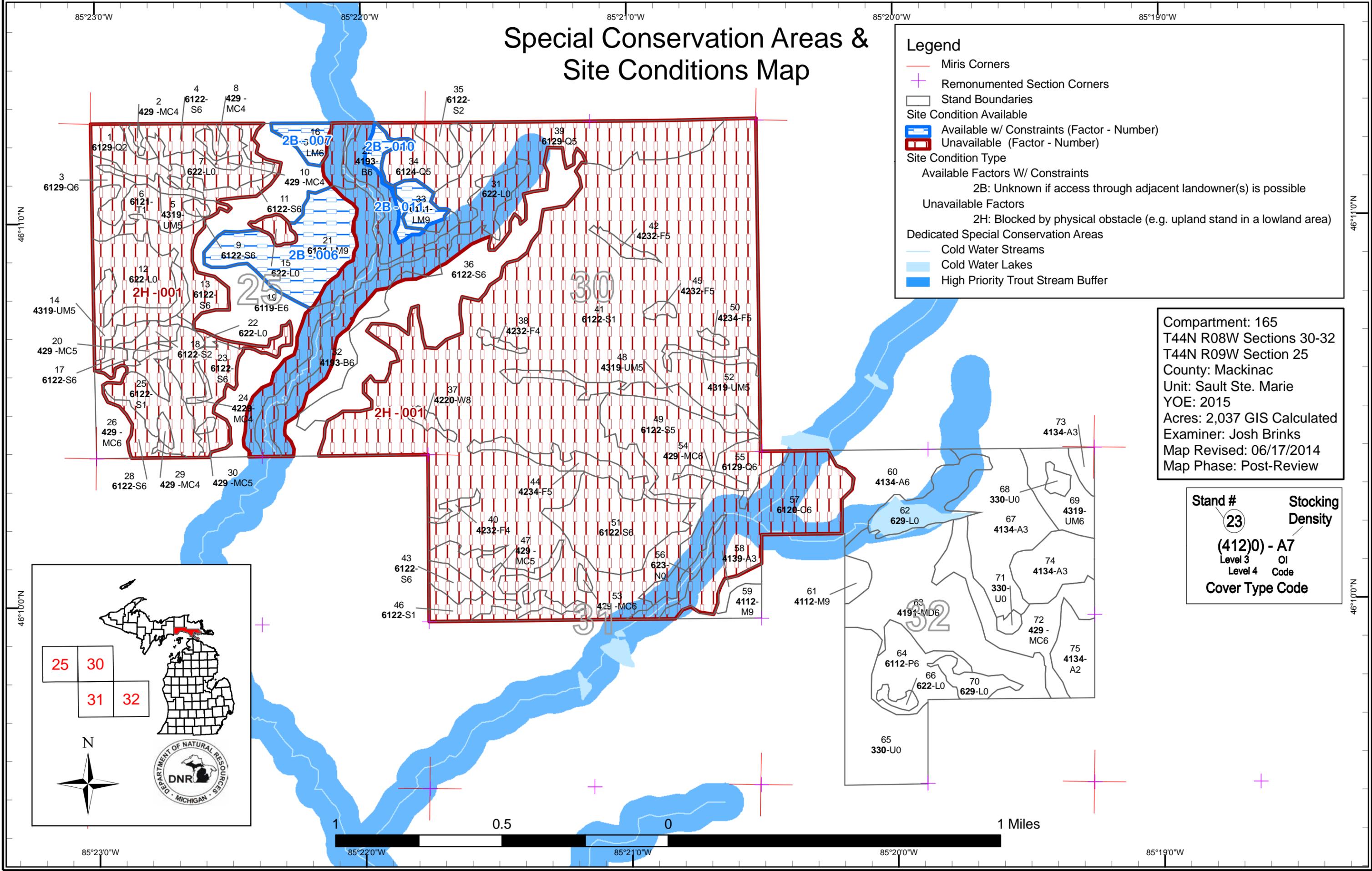
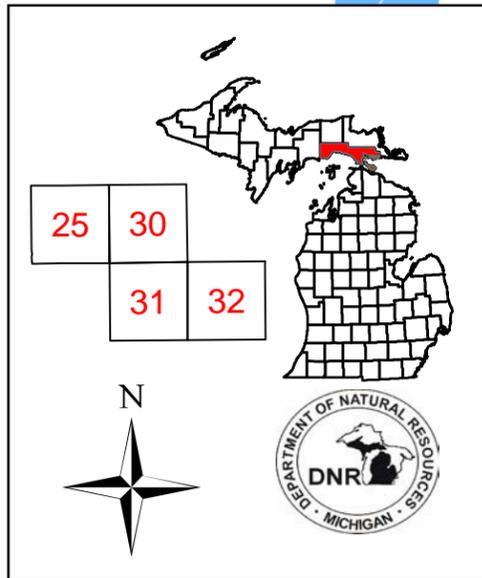
Special Conservation Areas & Site Conditions Map

Legend

- Miris Corners
- + Remonumented Section Corners
- Stand Boundaries
- Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)
- Site Condition Type
- Available Factors W/ Constraints
- 2B: Unknown if access through adjacent landowner(s) is possible
- Unavailable Factors
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- Dedicated Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer

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Cover Type & Treatment Map

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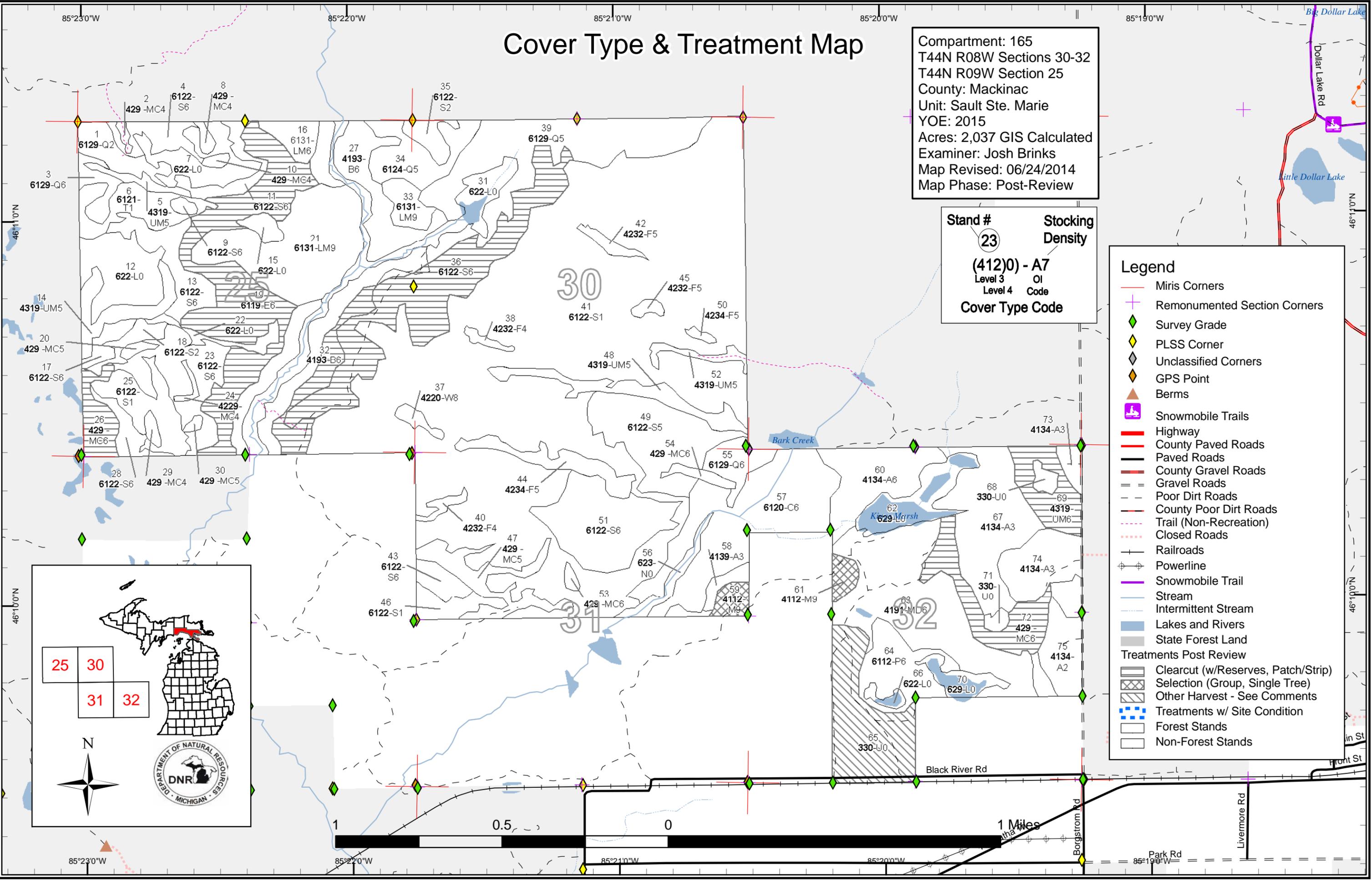
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- Treatments Post Review**
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- Selection (Group, Single Tree)
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- Treatments w/ Site Condition
- Forest Stands
- Non-Forest Stands

25 30
 31 32

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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	47	55	5	34	0	0	0	0	0	0	0	0	0	0	141
Cedar	0	0	0	0	0	0	0	80	0	0	0	0	0	0	80
Low-Density Trees	56	0	0	0	0	0	0	0	0	0	0	0	0	0	56
Lowland Aspen/Balsam Poplar	0	0	27	0	0	0	0	0	0	0	0	0	0	0	27
Lowland Conifers	0	0	0	0	0	24	0	0	84	21	0	0	0	0	129
Lowland Deciduous	0	0	0	0	0	0	0	0	105	0	0	0	0	0	105
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	85	0	85	
Lowland Shrub	135	0	0	0	0	0	0	0	0	0	0	0	0	0	135
Lowland Spruce/Fir	0	0	0	22	0	593	15	6	0	133	130	0	0	0	898
Marsh	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Mixed Upland Deciduous	0	0	85	0	0	0	0	0	0	0	0	0	0	0	85
Natural Mixed Pines	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Northern Hardwood	0	0	0	0	0	0	0	5	8	0	0	0	0	0	14
Paper Birch	0	0	0	0	0	0	0	0	43	27	0	0	0	0	70
Tamarack	0	0	0	0	0	0	21	0	0	0	0	0	0	0	21
Upland Conifers	0	0	0	0	0	0	0	52	15	22	0	0	0	0	88
Upland Mixed Forest	0	0	0	0	0	0	39	5	20	0	0	0	0	0	64
Upland Spruce/Fir	0	0	0	0	3	0	8	17	0	0	0	0	0	0	28
White Pine	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Total	245	55	116	56	3	617	82	167	278	203	130	0	85	0	2037



Report 2 – Proposed Treatment Summaries

Sault Ste. Marie Mgt. Unit
Year of Entry 2015

Compartment 165
Total Compartment Acres: 2,037

Acres by Treatment Type

Commercial Harvest - 255	Tree Planting - 0	Other - 0
Habitat Cut - 50	Opening Maintenance - 0	

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
(Habitat Cut)Low-Density Trees	0	0	0	0	0	50		50
Lowland Coniferous Forest	78	0	0	0	0	0		78
Lowland Deciduous Forest	85	0	0	0	0	0		85
Mixed Upland Conifers	41	0	0	0	0	0		41
Mixed Upland Deciduous	19	0	0	0	0	0		19
Northern Hardwood	0	12	0	0	0	0		12
Upland Mixed Forest	21	0	0	0	0	0		21
Total	244	12	0	0	0	50		305



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
19	45165019-Cut	84.7	6119 - Mixed Lowland Deciduous Forest	High Density Pole	88	141-170	Harvest	Clearcut with Reserves	611 - Lowland Deciduous Forest	Fld. Tr. Bdy. - Incomplete
<p><u>Prescription</u> Cut all deciduous 2" or more and conifer 4" or more. Leave a representative, healthy, mature aspen or birch spaced every 75ft (this will leave 8 trees per acre). Leave all white pine, cedar and hemlock. Buffer Black River by 300 feet. Stand is wet and should be cut in dry summer or frozen winter conditions.</p> <p><u>Specs:</u></p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, hemlock, yellow and paper birch, balsam fir, white spruce, black spruce and white pine.</p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2015</p>										
26	45165026-Cut	13.3	429 - Mixed Upland Conifers	High Density Pole	88	81-110	Harvest	Clearcut with Reserves	429 - Mixed Upland Conifers	Fld. Tr. Bdy. - Incomplete
<p><u>Prescription</u> Cut all deciduous 2" or more and conifer 4" or more. Leave a healthy, mature white or red pine spaced every 75ft (this will leave 8 trees per acre).</p> <p><u>Specs:</u></p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, birch, white pine, spruce, fir, jack pine, red pine, and tamarack.</p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2015</p>										
32	45165032-Cut	18.8	4193 - Birch, Aspen	High Density Pole	89	111-140	Harvest	Clearcut with Reserves	4193 - Birch, Aspen	Fld. Tr. Bdy. - Incomplete
<p><u>Prescription</u> Cut all deciduous 2" or more and conifer 4" or more. Leave a representative, healthy, mature tree spaced every 75ft (this will leave 8 trees per acre). Leave all white pine. Buffer the black river by 300 ft.</p> <p><u>Specs:</u></p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, paper and yellow birch, white pine, spruce, fir, red pine, and aspen.</p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2015</p>										
36	45165036-Cut	78.1	6122 - Black Spruce	High Density Pole	105	111-140	Harvest	Clearcut with Reserves	612 - Lowland Coniferous Forest	Fld. Tr. Bdy. - Incomplete
<p><u>Prescription</u> Cut all deciduous 2" or more and conifer 4" or more. Leave a representative, healthy, mature (8"+) tree spaced every 75ft (this will leave 8 trees per acre). Leave scattered supercanopy white pine. Leave all cedar. Cut this stand in the winter because of very wet ground.</p> <p><u>Specs:</u></p> <p><u>Other</u> <u>Comments:</u> No access to this stand because private landowners have not granted permission to cross their land and there are bridges needed.</p> <p><u>Next</u> <u>Steps:</u> 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.</p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2015</p>										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
59	45165059-Cut	6.4	4112 - Maple, Beech, Cherry Association	High Density Log	82	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Mark stand to 80 to 90 Basal Area. Mark all beech except those that look resistant to beech bark disease. Leave all conifers, black cherry, yellow <u>Specs:</u> birch and paper birch. Some larger canopy gaps may be desirable around the cherry and yellow birch if possible to regenerate those species and enhance the advanced regeneration present. <u>Other</u> <u>Comments:</u> Need to obtain access from adjacent landowner in order to get into this stand. <u>Next</u> <u>Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, paper and yellow birch, black cherry , and fir. <u>Proposed</u> <u>Start Date:</u> 10/01/2014										
61	45165061-Cut	5.5	4112 - Maple, Beech, Cherry Association	High Density Log	79	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Mark stand to 80 to 90 Basal Area. Retain some beech with the smooth bark and wildlife trees. Cut almost all balsam that is greater than 4" dbh, <u>Specs:</u> leave 2-3 per acre.. Leave all serviceberry. Some larger canopy gaps may be desirable to enhance the advanced regeneration present. <u>Other</u> <u>Comments:</u> <u>Next</u> <u>Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, paper and yellow birch, paper birch, white pine, spruce, fir, and serviceberry. <u>Proposed</u> <u>Start Date:</u> 10/01/2014										
69	45165069-Cut	20.6	4319 - Mixed Upland Forest	High Density Pole	68		Harvest	Clearcut with Reserves	413 - Aspen	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Cut all deciduous 2" or more and conifer 4" or more. Leave a representative, healthy, mature(10"+) tree spaced every 75ft (this will leave 8 trees <u>Specs:</u> per acre). <u>Other</u> <u>Comments:</u> This treatment should finally convert this stand from an old opening into an aspen stand. <u>Next</u> <u>Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, yellow and paper birch, balsam fir, white spruce, jack pine and white pine. <u>Proposed</u> <u>Start Date:</u> 10/01/2014										
72	45165072-Cut	28.1	429 - Mixed Upland Conifers	High Density Pole	70	111-140	Harvest	Clearcut with Reserves	413 - Aspen	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Cut all deciduous 2" or more and conifer 4" or more. Leave a representative, healthy, mature(10"+) tree spaced every 75ft (this will leave 8 trees <u>Specs:</u> per acre). Portion of the stand along borgstram road and the finder running down to the private will be left for retention. Stay out of areas of thick aspen regeneration. <u>Other</u> <u>Comments:</u> <u>Next</u> <u>Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, paper and yellow birch, aspen, white pine, spruce, fir, jack pine, red pine. <u>Proposed</u> <u>Start Date:</u> 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
65 NF_45165065-Cut	49.9	3303 - Mixed Low Density Trees				Harvest	Other - Specify in Comments	3303 - Mixed Low Density Trees	Fld. Tr. Bdy. - Incomplete

Prescription: Cut all Scotch Pine.

Specs:

Other Comments: Remove the barb wire fence around the old home/barn site.

Next Steps: Possible location for a prescribed burn to knock back some of the brush and maintain the opening.

Proposed Start Date: 10/01/2014

**Total Treatment
Acreage Proposed: 305.4**



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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

Total Treatment
Acreage Proposed: 0.0

Report 5 – Site Conditions

Sault Ste. Marie Mgt. Unit

Josh Brinks : Examiner

Compartment 165

Year of Entry 2015

Availability for Management

Availability for Management			Dominant Site Conditions			
Total Acres	Acres Available	Acres Not Available		No	2H	2B
140	140		Aspen	140		
80	0	80	Cedar	0	80	
27	27		Lowland Aspen/Balsam Poplar	27		
129		129	Lowland Conifers		129	
105	85	21	Lowland Deciduous		21	85
85	69	16	Lowland Mixed Forest		16	69
898	78	820	Lowland Spruce/Fir		820	78
85	85		Mixed Upland Deciduous	85		
2		2	Natural Mixed Pines		2	
14	14		Northern Hardwood	14		
70	28	42	Paper Birch		42	28
21		21	Tamarack		21	
88	50	38	Upland Conifers	37	38	13
64	21	43	Upland Mixed Forest	21	43	
28		28	Upland Spruce/Fir		28	
3		3	White Pine		3	
1,839	596	1,243	Total Forested Acres	324	1,243	273
	32%	68%	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 Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
001	Not Available	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	1,350	2B: Unknown if access through adjacent landowner(s) is possible	2G: Too wet (sensitive soils, does not include access issues)	2E: Road needed	3J: Water quality / BMPs (stream, river, or lake)
<p>Comments:</p> <p>This whole area has no access at this time. Most of the merchantable wood is blocked by either really wet ground or by the river. The private landowners in this area have also denied us access for management purposes. Even if we were to ever gain access from the private landowners we would need a bridge across the Bark Creek because the current one is not rated for trucks.</p>							

Report 5 – Site Conditions

Sault Ste. Marie Mgt. Unit

Josh Brinks : Examiner

Compartment 165

Year of Entry 2015

006	Available	2B: Unknown if access through adjacent landowner(s) is possible	51	2E: Road needed	
Comments:					
007	Available	2B: Unknown if access through adjacent landowner(s) is possible	9	2E: Road needed	
Comments:					
010	Available	2B: Unknown if access through adjacent landowner(s) is possible	9	2B: Unknown if access through adjacent landowner(s) is possible	2D: Portable Bridge Needed (Dept. bridge will be adequate)
Comments:					
011	Available	2B: Unknown if access through adjacent landowner(s) is possible	9	2D: Portable Bridge Needed (Dept. bridge will be adequate)	
Comments:					



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
Comments				



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

Conservation Area	Type	Description
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.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6129 - Mixed Coniferous Lowland Forest	Medium Density	13.3	97		Data taken from previous inventory. This stand is a mixture of small pockets of non forested wetlands mixed into the spruce and tamarack stand.
2	429 - Mixed Upland Conifers	Low Density Pole	1.4	80	1-50	An open ridge that is growing in with pine on top of the ridge and spruce on the edges. Trail runs through this stand from the north.
3	6129 - Mixed Coniferous Lowland Forest	High Density Pole	7.9	97		No Access into this stand. Looks to be mostly black spruce with some scattered white pine and likely some birch and red maple.
4	6122 - Black Spruce	High Density Pole	11.3	97	81-110	Very wet black spruce stand with tamarack and scattered white pine.
5	4319 - Mixed Upland Forest	Medium Density Pole	4.6	87		There may be a 4 wheeler trail that runs out to this stand from the north but it got to wet to continue. This is a high and dry ridge with pine, birch and spruce.
6	6121 - Tamarack	Low Density Sapling	20.6	69		Wet stand with no access. Looks to be a stand fo small scattered tamarack with some spruce.
8	429 - Mixed Upland Conifers	Low Density Pole	2.1	77		Islands of upland ground with pine growing on them and spruce on the edges.
9	6122 - Black Spruce	High Density Pole	2.0	94		Wet stand with now access. Black spruce with scattered white pine.
10	429 - Mixed Upland Conifers	Low Density Pole	1.7	77		This is another high ridge taht has pines and spruce growing on it. Last time it was inventoried as a G this time it is forested.
11	6122 - Black Spruce	High Density Pole	10.0	97		Wet stand with no access. Looks to be spruce with some scattered white pine. Information taken from previous inventory.
13	6122 - Black Spruce	High Density Pole	21.1	94		Wet stand with no access. Information is from previous inventories. This is a black spruce stand with scattered white pine and tamarack.
14	4319 - Mixed Upland Forest	Medium Density Pole	15.3	87		There is no access to this stand. It is a system of high and dry ridges that are forested with red pine, white pine, jack pine, aspen, birch and red maple. In the last inventory theses stands were open now they are growing in and are forested stands.
16	6131 - Hemlock, White Pine, Maple, Birch	High Density Pole	9.3	137		Did not make it to this stand. Information was taken from previous inventories. It is a hemlock stand with birch, red maple, balsam fir, white pine and spruce growing in it.
17	6122 - Black Spruce	High Density Pole	6.1	79		There is no access to this stand at this time. Looks like a small pole size black spruce stand with scattered white pine. Information is taken from previous inventory.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	6122 - Black Spruce	Medium Density	6.7	69		No Access to this stand at this time. Stand looks to be a sapling spruce stand with scattered tamarack. There are some small areas of open lowlands.
19	6119 - Mixed Lowland Deciduous Forest	High Density Pole	105.5	88	141-170	This stand sit on the higher ground along the black river. It has some pit and mound topography in the stand and the pits are very wet.
20	429 - Mixed Upland Conifers	Medium Density Pole	2.0	77		Island of upland ground with pines on the tip of the ridge and spruce along the edges. It is possible you might find red maple, paper birch or aspen also.
21	6131 - Hemlock, White Pine, Maple, Birch	High Density Log	65.8	137		Did not make it to this stand, information is from previous inventory. Mature hemlock with red maple and white spruce. There is also pockets of paper birch. There is areas of good hemlock regeneration taht is 6-20'+ tall. 160 BA
23	6122 - Black Spruce	High Density Pole	33.8	94	111-140	This is a pole size black spruce stand that is growing on a mat of sphafnum. There are some scatterd cedar growing in the wettest areas of the stand. There is also scattered overstory white pine growing on the edges of the stand.
24	42290 - Natural Mixed Pine	Low Density Pole	1.6	77	1-50	This is a ridge of higher ground with pines growing on top of the ridge and spruce along the edges. A couple of scattered smaller paper birch.
25	6122 - Black Spruce	Low Density Sapling	21.6	33		Lowland, sapling size spruce stand with tamarack and deciduous trees.
26	429 - Mixed Upland Conifers	High Density Pole	13.3	88	81-110	Stand consists of ridges of pine and hardwoods mixed with low areas of spruce.
27	4193 - Birch, Aspen	High Density Pole	27.3	91		There is a road that hits the river on the south side of this stand with a walking bridge that crosses it. Because of conditions this winter and spring I was not able to get up into this stand. Information was taken from previousl inventory. Stand is very similar to preinventory stand #15. Contains pole size birch and red maple with log size aspen scattered throughout. The understory is thick with balsam fir 10-20 feet tall.
28	6122 - Black Spruce	High Density Pole	7.7	97	141-170	Thick stand of black spruce. Has some higher ground scattered throughout the stand.
29	429 - Mixed Upland Conifers	Low Density Pole	2.2	77		High ground with pine and spruce maybe a red maple, aspen or birch growing also.
30	429 - Mixed Upland Conifers	Medium Density Pole	1.2	77		Upland stand with pine on the dry ground and spruce as you transition into the lowland.
32	4193 - Birch, Aspen	High Density Pole	43.0	89	111-140	Nice stand of paper birch and red maple with large diameter aspen. Has some scattered white pine. There are a few trails that run from the road down to the river through this stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
33	6131 - Hemlock, White Pine, Maple, Birch	High Density Log	9.9	137		Access was not an option into this stand this year. It may be accessed by the bridge that crosses into the adjacent stand. It is a mature log size hemlock stand with red maple and paper birch. It was described as being park like with 3"+ hemlock regeneration and 200+ BA.
34	6124 - Lowland Spruce-Fir	Medium Density Pole	24.0	57		No access into this stand. It runs across the compartment line into the compartment to the north. Spruce Fir, white pine with some non forested wetland areas.
35	6122 - Black Spruce	Medium Density	7.3	57		No Access to this stand. Small size spruce with one small dry island in the middle of the stand.
36	6122 - Black Spruce	High Density Pole	82.7	105	111-140	This is a wet stand that is mostly a mix of black spruce and white pine. Stand is thick to the sapling and pole size conifers. Road through this stand is not in good condition and has some large water holes.
37	42200 - Natural White Pine	Medium Density Log	3.5	85	81-110	A stand of log size white pine over top of spruce. Open area on east side of stand.
38	42320 - Upland Spruce	Low Density Pole	2.3	68	1-50	Upland island in the treed bog, mostly open with trees along the edges.
39	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	71.1	89		Mixed lowland stand of spruce, cedar, pine, and tamarack. No access to this stand because it is very wet.
40	42320 - Upland Spruce	Low Density Pole	3.0	46	1-50	Lots of spruce along the edges of the bog, on top of the ridge it is more white pine and paper birch. Stand is fairly open along the top of the ridge.
41	6122 - Black Spruce	Low Density Sapling	575.9	57		Large area of treed bog. There are numerous small islands of high ground. On these islands there are spruce, white pine and birch trees.
42	42320 - Upland Spruce	Medium Density Pole	3.8	69		
43	6122 - Black Spruce	High Density Pole	7.8	64	51-80	Lowland stand of pole size black spruce with some scattered white pine. Very wet ground, some water can be seen under the snow.
44	42340 - Upland Spruce/Fir	Medium Density Pole	15.2	70	51-80	Long narrow ridge of upland in the middle the treed bog.
45	42320 - Upland Spruce	Medium Density Pole	2.3	68	1-50	Upland island in the treed bog.
46	6122 - Black Spruce	Low Density Sapling	9.8	57		Lowland treed bog.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
47	429 - Mixed Upland Conifers	Medium Density Pole	21.7	92	51-80	A high and dry ridge in the spruce swamp. On the highest parts of the ridge it is dominated by paper birch and redmaple. As you move to some of the lower areas on the ridge it is more spruce and white pine.
48	4319 - Mixed Upland Forest	Medium Density Pole	18.0	64	81-110	Ridge out in the swamp. Some upland cedar can be found in this stand and it shows sign of deer browse. On the highest ground birch is growing but as you go lower there is more spruce.
49	6122 - Black Spruce	Medium Density Pole	47.0	97	51-80	A stand of small black spruce. There are a few areas of higher ground. These ridges have pine and birch on them.
50	42340 - Upland Spruce/Fir	Medium Density Pole	1.4	74	51-80	Small island in the treed bog. Mostly spruce/white pine with a few scattered deciduous trees.
51	6122 - Black Spruce	High Density Pole	47.1	100	111-140	Stand of pole size black spruce mixed with some cedar along the east edge. Stand is a bit more open on the west side.
52	4319 - Mixed Upland Forest	Medium Density Pole	5.1	73	51-80	An upland ridge out in the treed bog. There is a trail running through this stand which runs through the cedar stand to the
53	429 - Mixed Upland Conifers	High Density Pole	1.6	73	51-80	
54	429 - Mixed Upland Conifers	High Density Pole	4.0	73	81-110	An upland ridge down in the swamp. Patch of deciduous trees on the east side of the stand.
55	6129 - Mixed Coniferous Lowland Forest	High Density Pole	12.5	86	111-140	Wet stand of mixed conifers. Some areas are heavy to cedar. Other areas of spruce and birch with a thick understory of fir.
57	6120 - Lowland Cedar	High Density Pole	80.4	78	81-110	This is a thick lowland cedar stand. There is a small area along the north edge where it is more open and full of tag alder. Also in the southeast corner there is an inclusion of a stand that was cut in 1958. It now has some birch, spruce, cedar and fir.
58	4139 - Aspen, Mixed Deciduous	High Density Sapling	4.6	22		Stand was cut in 1992. Doing real well. On the edge of becoming a pole size stand. There is some M3/M5 located along the hardwood edge. Transitions into a tag alder and cedar mess on the north side.
59	4112 - Maple, Beech, Cherry Association	High Density Log	8.2	82	81-110	A nice stand of red maple. The stand runs along the top of a ridge. There is some yellow birch coming up in the understory. Lots of good regeneration that should be released. There is black cherry and paper birch growing on the lower ground to the north.
60	4134 - Aspen, Spruce/Fir	High Density Pole	33.9	35		Stand was cut in 1979 and is still doing well. This stand had a more clean cut than some of the other stands in the area. There is not much for overstory conifers like in other stands. Nice aspen and fir.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
61	4112 - Maple, Beech, Cherry Association	High Density Log	5.5	79	81-110	This hardwood stand is mostly sugar maple on the north side of the ridge but as you go up the ridge it turns into more red maple. Lots of balsam fir regeneration in the under story, some of it is pole size up to 30' tall. A few serviceberry that are quite large are located near the top of the hill.
63	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	84.7	27	1-50	A good mix of early successional species. Still a lot of sapling size trees in the canopy. Scattered overstory spruce and balsam fir. There is a patch just south of Kings Marsh that has larger trees. Aspen in this stand ranges from 2-10"
64	6112 - Lowland Aspen	High Density Pole	27.0	27	51-80	This is a lowland stand that was cut in 1986. Aspen/bam is doing real well here. There are a few scattered ash. Along the edge of the field there is a steep ridge with some large maples growing on it. Close to the marsh on the east side of the stand there are smaller sapling size trees.
67	4134 - Aspen, Spruce/Fir	High Density Sapling	54.7	18		Stand was last cut in 1996 to try to promote aspen regeneration. There is thick sapling aspen with scattered pole size conifers mixed in. There are a few scattered pole size aspen and paper birch.
69	4319 - Mixed Upland Forest	High Density Pole	20.6	68		Canopy is pole size conifer with aspen coming up in between. There is a decent patch of pole size aspen (6-10") in the southern portion. Stand was last harvested to increase aspen.
72	429 - Mixed Upland Conifers	High Density Pole	37.1	70	111-140	This is a stand of mixed conifers. It was an opening in the past which has filled in with a variety of species. There are some patches of aspen but most of it is scattered throughout the stand. The part of the stand on the Borgstrom road has a large component of jack pine. There are thick patches of very limby spruce. Lots of spruce gulls.
73	4134 - Aspen, Spruce/Fir	High Density Sapling	4.9	4		Stand was cut in 2010 that has a lot of aspen red maple and paper birch coming up. There are scattered larger birch and maple (2"-4"). Also some larger conifers 10-20' tall. Regeneration looks great.
74	4134 - Aspen, Spruce/Fir	High Density Sapling	24.5	4		Sapling size stand that was cut in 2010. Has scattered larger trees left during the harvest (3"-6") There is a patch in the middle that is regenerating slowly and has lots of raspberry growing. Regen looks great besides that.
75	4134 - Aspen, Spruce/Fir	Medium Density	18.0	4		Cut in 2010 and has some very good regen. This probably has a fully stocked canopy but because of the deep snow it was questionable. There are some scattered trees that were left behind during harvest. Lots of cherry and birch regen.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
7	622 - Lowland Shrub	20.7	Unspecified	Unspecified	
12	622 - Lowland Shrub	28.9	Unspecified	Unspecified	
15	622 - Lowland Shrub	4.6	Unspecified	Unspecified	
22	622 - Lowland Shrub	6.2	Unspecified	Unspecified	
31	622 - Lowland Shrub	39.0	Unspecified	Unspecified	This stand contains the Black River. Mostly tag alder shrub and brush along the banks.
56	623 - Emergent Wetland	7.3	Unspecified	Unspecified	Contains Bark Creek
62	629 - Mixed non-forested wetland	23.1	Unspecified	Unspecified	
65	3303 - Mixed Low Density Trees	49.9	Yes	Low	Old field that was used for grazing. There is still a stone structure located in the southeast corner. There are scattered trees filling in the field. There is a nice patch of pole size birch, scattered spruce and fir, and a patch of jack pine. There are also scotch pine present in the field and seem to be naturally regenerating prolifically in places.
66	622 - Lowland Shrub	2.8	Unspecified	Unspecified	
68	3302 - Low Density Conifer Trees	3.3	Unspecified	Unspecified	
70	629 - Mixed non-forested wetland	9.3	Unspecified	Unspecified	
71	3302 - Low Density Conifer Trees	2.5	Unspecified	Unspecified	