



Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 265

Entry Year 2015

Acreage: 1,162

County Marquette

Management Area: Chain Lakes Moraine

Revision Date: 07/03/2013

Stand Examiner: Thomas Seablom

Legal Description:

T45N R28W Sec 29 & Sec 32 except S1/2 SE.

Identified Planning Goals:

Management goals for this compartment are to continue to provide a sustainable flow of timber products and to continue to manage wildlife habitat and protect water quality. Timber products are primarily for fiber production with some pine and hardwood sawlog management taking place. Wildlife habitat is being provided primarily in early successional states, with some seral state habitat being provided in the red pine cover types.

Soil and topography:

The primary soil makeup in this compartment are of the Sagola-Rubicon complex and the Rubicon-Keweenaw complex. These soils are relatively deep excessively to moderately well drained sandy soils. Tawas soils also exist along the creeks and drainages which are poorly drained. A rock outcrop does exist in the geographic center of the compartment. Topography is relatively level to gently rolling.

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

Ownership in this portion of the landscape is predominantly State with some scattered private individual ownership. There is a large block of private club land (Michigan Northwoods Club) located to the north of this compartment. Development is minimal and is in hunting camps. Land use is associated with timber production, hunting, fishing, and general recreation.

Unique Natural Features:

No Unique Natural Features known.

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:

Special Conservation Area's previously type as Potential Old Growth, are being recommended to be changed to riparian corridors.

Watershed and Fisheries Considerations:

This compartment contains a reach of Camp Eleven Creek and an un-named tributary. Camp Eleven Creek is a cold-water stream that supports a resident population of brook trout, and provides spawning, nursery and thermal refuge habitat for brook trout. Fisheries Division also maintains a sediment basin and brook trout spawning riffles in this compartment. 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 trout and other 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:

Compartment 265 is found within the Chain Lakes Management Area; which is a Disintegration Moraine in Southwestern Marquette County. The State Forest covers about 84,600 acres and is mostly contiguous. State Forest Lands are the major ownership in this vicinity. The dominant Natural Communities are dry mesic northern forests, poor conifer swamps, and mesic northern forests. Major forest cover types include Aspen, Mixed Lowland Conifer, and Jack Pine. In general, this area has a mid-range site quality. This management area provides multiple benefits to the public including forest products, dispersed recreational activities, and habitat for fish and wildlife species. Some of the most significant wildlife management issues in the management area are: mast (hard and soft); habitat fragmentation; mature forest conditions; mesic conifer; coarse woody debris; and retention or development of large living and dead standing trees (for cavities). Wildlife Division would like to increase the oak resource within this management area and to optimize acorn production. This management area represents approximately 1/4 of the oak resource on WUP state forest. In addition to promoting

most crops another priority is to maintain or increase wildlife corridors especially along riparian corridors.

The following have been identified as featured species for the Chain Lakes Management Area: Black bear, Gray Jay, Pileated Woodpecker, Northern Goshawk, Red Crossbill. However, the featured species concept does not preclude the management for other wildlife species within a particular MA, rather it is simply intended to be as a tool to help prioritize or focus habitat management.

For lands purchased with Pittman–Robertson Act or Game and Fish funds, the primary objective of vegetative management must be wildlife restoration.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of coarse-textured glacial till. There is insufficient data to determine the glacial drift thickness. The Precambrian Archean Granite/Gneiss subcrops below the glacial drift. This rock could be used as a building or dimension stone. Gravel pits are located just to the west and potential should be good. Abandoned iron mines are located six miles to the east. Section 22 was previously leased for metallic exploration, but there are no current State leases. There is no economic oil and gas production in the UP.

Vehicle Access:

Bryan Creek Road (Co. Rd. PW), Kates Grade (PPZ), and the Camp 11 Truck Trail (PPO) are the primary roads in this compartment. General access is good. Some woods roads have berms in place to limit vehicle access beyond certain points.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

No developed recreational facilities exist at this time and no opportunity exists.

Fire Protection:

Several volatile fuel types are found in the compartment and the surrounding landscape. The compartment resides just south of a larger sandy outwash plain. A large grass opening (approximately a section in size) is immediately to the north and west of the compartment, several hundred acres of jack pine are located to the north, as are scattered red and white pine stands. Some red and white pine as well as jack pine are in the north end of the compartment. Spruce-fir composes the understory in just about every stand within this compartment. The road system in this area is adequate enough to handle current fire suppression equipment and provides fire breaks for ground fire activity. Adequate water sources are also present in the Camp 11 and Bryan Creek's.

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: 265
 T45N R27W Sec. 29, 32
 County: Marquette
 Unit: Gwinn
 YOE: 2015
 Acres: 1,162 GIS Calculated
 Examiner: Thomas Seablom
 Map Revised: 08/08/2013
 Map Phase: Pre-Review

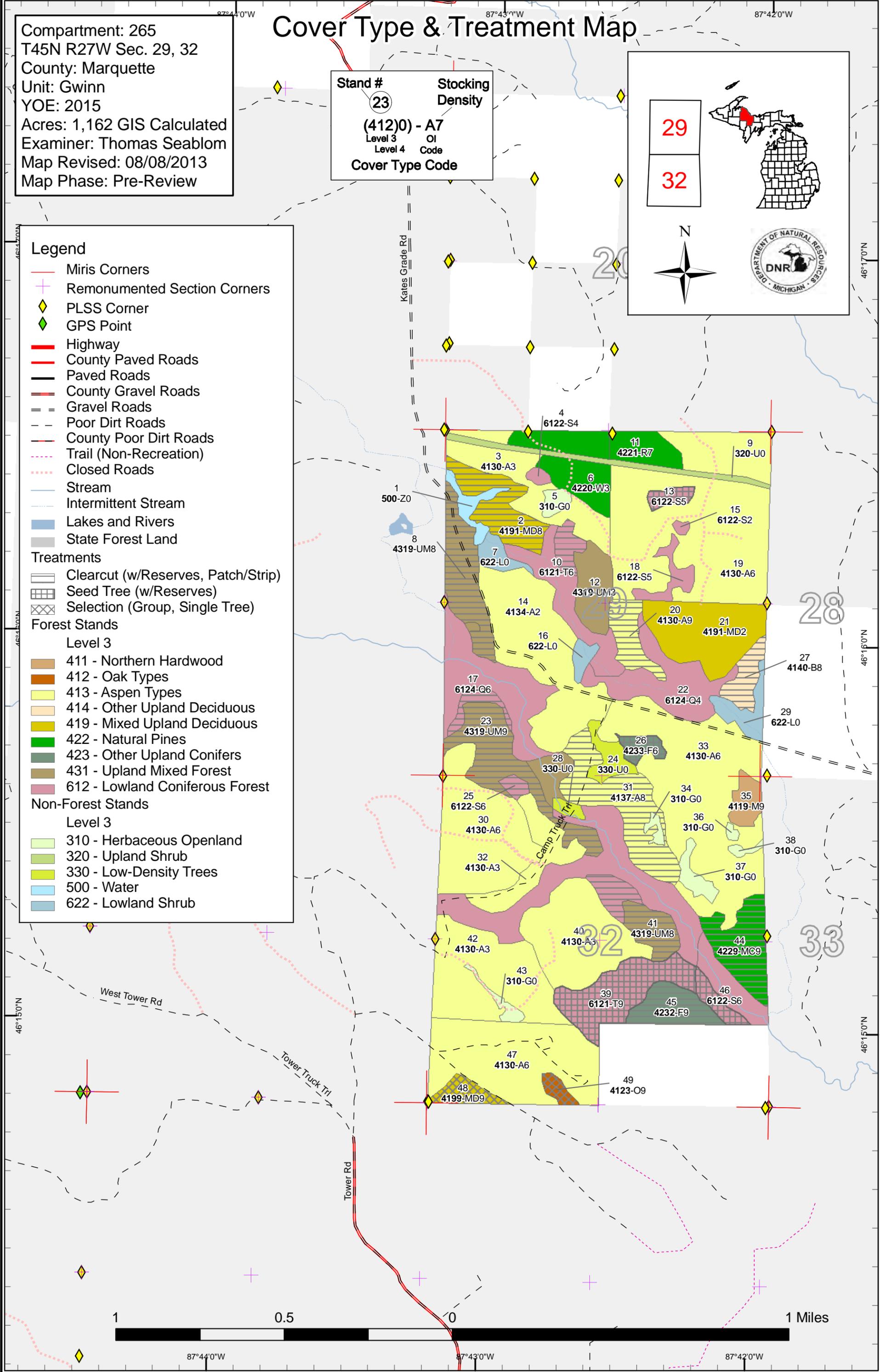
Stand #
 23
Stocking Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

29
 32



Legend

- Miris Corners
 - + Remonumented Section Corners
 - ◆ PLSS Corner
 - ◆ GPS Point
 - Highway
 - County Paved Roads
 - Paved Roads
 - County Gravel Roads
 - Gravel Roads
 - Poor Dirt Roads
 - County Poor Dirt Roads
 - Trail (Non-Recreation)
 - Closed Roads
 - Stream
 - Intermittent Stream
 - Lakes and Rivers
 - State Forest Land
- Treatments**
- ▨ Clearcut (w/Reserves, Patch/Strip)
 - ▩ Seed Tree (w/Reserves)
 - ▧ Selection (Group, Single Tree)
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
 - 412 - Oak Types
 - 413 - Aspen Types
 - 414 - Other Upland Deciduous
 - 419 - Mixed Upland Deciduous
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3
- 310 - Herbaceous Openland
 - 320 - Upland Shrub
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub



87°44'0"W 87°43'0"W 87°42'0"W 46°15'0"N 46°16'0"N

Stand Boundary Map

Compartment: 265
 T45N R27W Sec. 29, 32
 County: Marquette
 Unit: Gwinn
 YOE: 2015
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 Examiner: Thomas Seablom
 Map Revised: 08/08/2013
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Stand #
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Stocking Density
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Legend

- Miris Corners
- Remonumented Section Corners
- PLSS Corner
- GPS Point
- Highway
- County Paved Roads
- Paved Roads
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- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Stream
- Intermittent Stream
- Stand Boundaries

Forest Stands

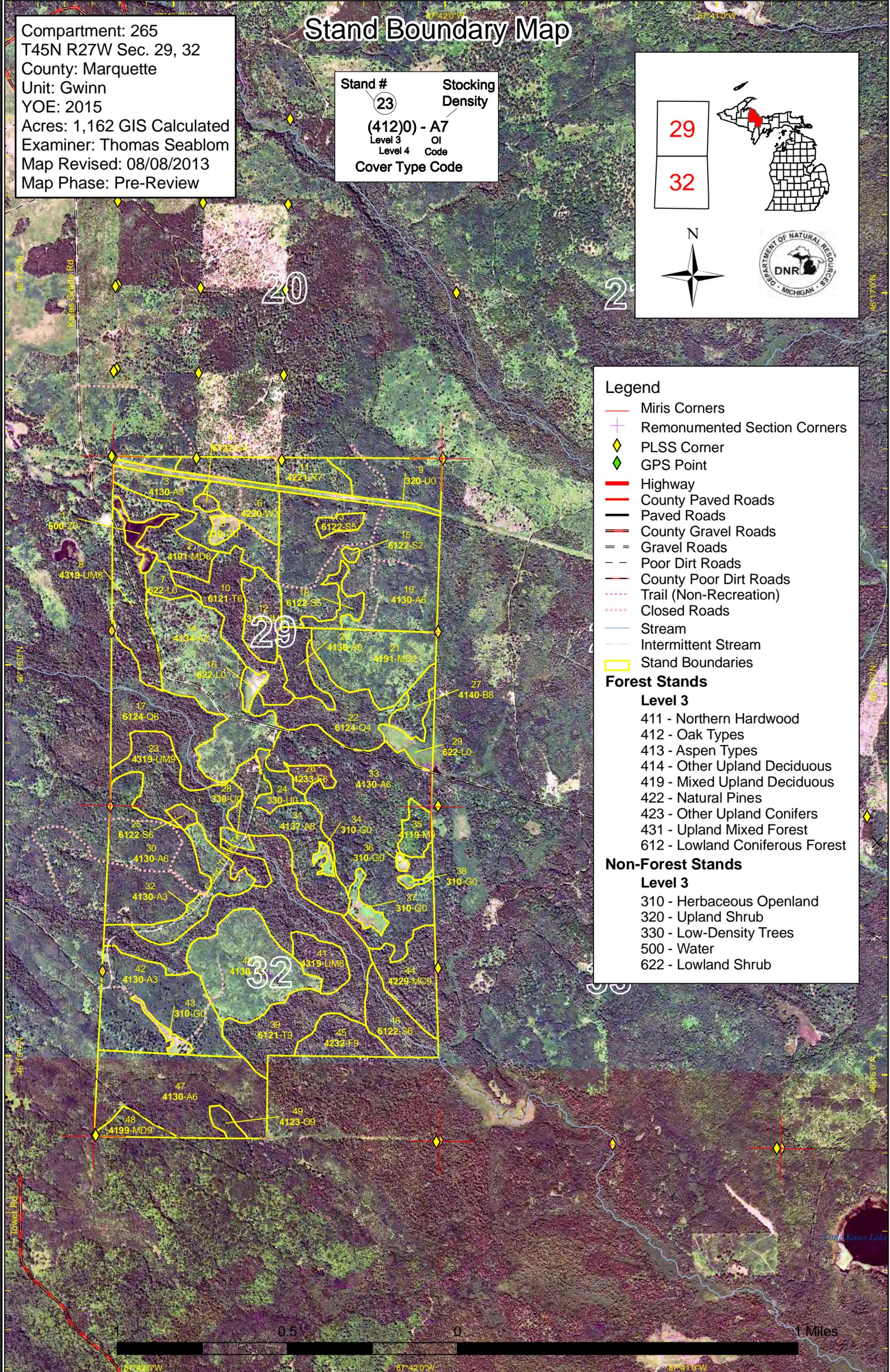
Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
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Non-Forest Stands

Level 3

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- 330 - Low-Density Trees
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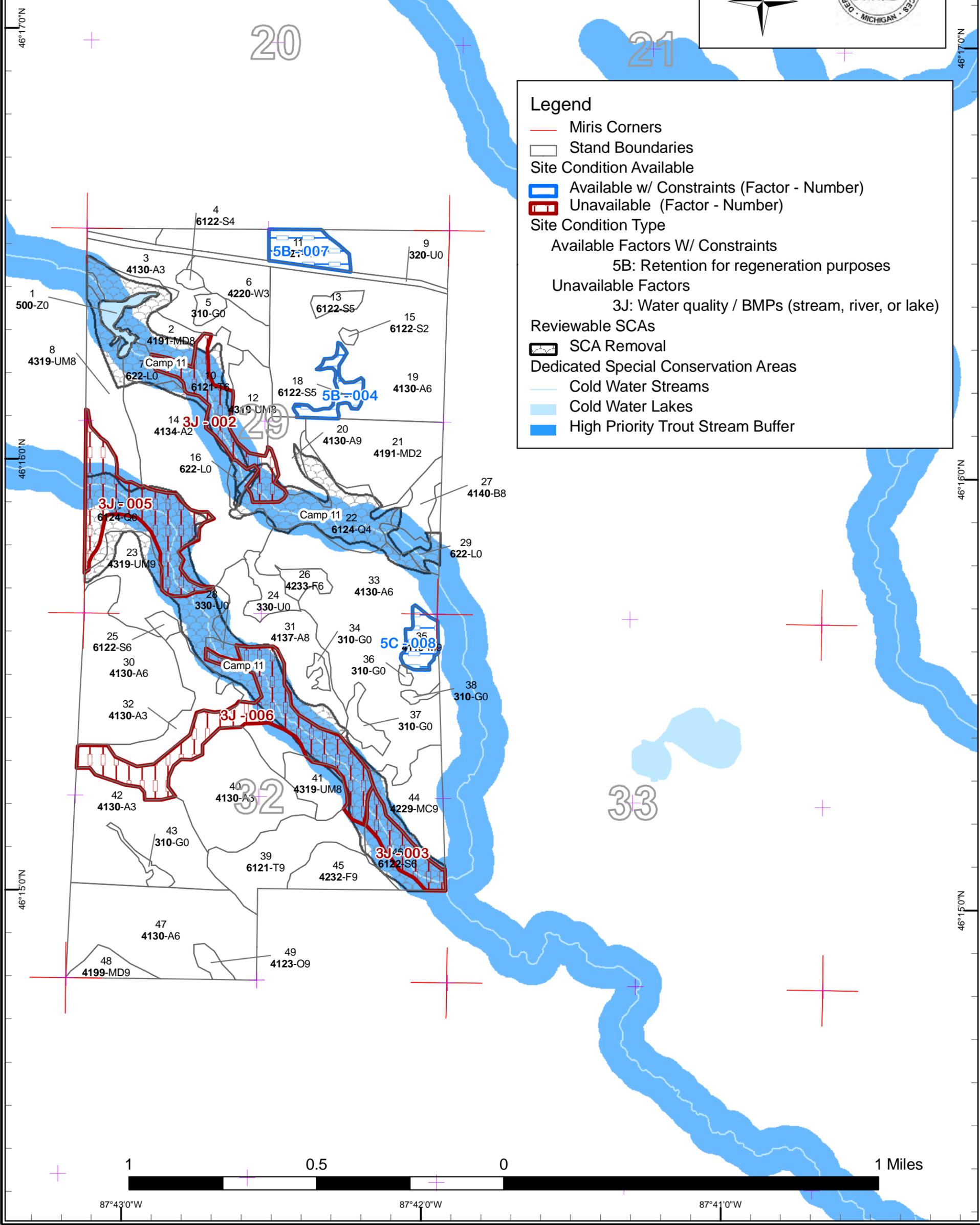
Special Conservation Areas & Site Conditions Map

Compartment: 265
 T45N R27W Sec. 29, 32
 County: Marquette
 Unit: Gwinn
 YOE: 2015
 Acres: 1,162 GIS Calculated
 Examiner: Thomas Seablom
 Map Revised: 08/08/2013
 Map Phase: Pre-Review

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

Legend

- Miris Corners
- Stand Boundaries
- Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)
- Site Condition Type
- Available Factors W/ Constraints
- 5B: Retention for regeneration purposes
- Unavailable Factors
- 3J: Water quality / BMPs (stream, river, or lake)
- Reviewable SCAs
- SCA Removal
- Dedicated Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



1 0.5 0 1 Miles

87°43'0"W 87°42'0"W 87°41'0"W



	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	132	85	247	0	102	12	0	0	36	0	0	0	0	0	614
Herbaceous Openland	16	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Low-Density Trees	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Conifers	0	0	0	0	0	0	31	0	42	0	0	0	0	0	72
Lowland Shrub	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Lowland Spruce/Fir	0	0	0	0	1	0	0	0	34	0	0	0	0	0	35
Mixed Upland Deciduous	0	38	0	0	0	0	0	0	22	7	0	0	0	0	68
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	23	0	0	0	0	23
Northern Hardwood	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8
Oak	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
Paper Birch	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9
Red Pine	0	0	0	0	0	0	0	0	12	0	0	0	0	0	12
Tamarack	0	0	0	0	0	0	0	0	28	90	0	0	0	0	117
Upland Mixed Forest	0	16	0	0	0	0	0	12	64	0	0	0	0	0	92
Upland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Upland Spruce/Fir	0	0	0	0	0	5	0	0	15	0	0	0	0	0	20
Water	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
White Pine	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27
Total	193	166	247	0	103	17	40	12	260	124	0	0	0	0	1162



Report 2 – Proposed Treatment Summaries

Gwinn Mgt. Unit
Year of Entry 2015

Compartment 265
Total Compartment Acres: 1,162

Acres by Treatment Type

Commercial Harvest - 265 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
Aspen Types	49	0	0	0	0	0	0	49
Lowland Coniferous Forest	21	0	41	0	0	0	0	62
Mixed Upland Deciduous	22	7	0	0	0	0	0	30
Natural Pines	23	0	0	0	0	0	0	23
Oak Types	0	4	0	0	0	0	0	4
Other Upland Conifers	15	0	5	0	0	0	0	20
Other Upland Deciduous	9	0	0	0	0	0	0	9
Upland Mixed Forest	68	0	0	0	0	0	0	68
Total	209	11	46	0	0	0	0	265



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
2	32265002-Cut	22.3	4191 - Mixed Upland Deciduous with Conifer	Medium Density Log	87		Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<u>Prescription</u> Clearcut, cutting all trees >4" in diameter at stump height.										
<u>Specs:</u>										
<u>Other</u> Buffer ponds and creeks accordingly. This will severely reduce stand size and may prohibit harvesting of this stand. Retention should be 10%										
<u>Comments:</u> and consist of large overmature big tooth aspen and white birch.										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
8	32265008-Cut	25.0	4319 - Mixed Upland Forest	Medium Density Log	81		Harvest	Clearcut with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
<u>Prescription</u> Clearcut leaving submerchantable spruce-fir. Cut all red and white pine greater than 12" at stump height. Manage stand for mixed species.										
<u>Specs:</u>										
<u>Other</u> Spruce budworm is in this stand and should be monitored for early harvest.										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
10	32265010-Cut	6.2	6121 - Tamarack	High Density Pole	87		Harvest	Clearcut	6121 - Tamarack	Cmpt. Review Proposal
<u>Prescription</u> Clearcut this portion of the stand. Cut all merchantable trees, leaving scattered older tamarack.										
<u>Specs:</u>										
<u>Other</u> Seed source will be from adjacent timber. Buffer creek(s) accordingly. Stand size may decrease pending buffer.										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
13	32265013-Cut	4.1	6122 - Black Spruce	Medium Density Pole	87		Harvest	Seed Tree with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
<u>Prescription</u> Seed tree harvest leaving approx. 30 black spruce and 10 tamarack within the stand area. Cut any red pine along the edge that is less than 20" at stump height.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval
										Status
17	32265017-Cut	5.2	6124 - Lowland Spruce-Fir	High Density Pole	87		Harvest	Clearcut	6122 - Black Spruce	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut a 1 to 2 chain strip from the upland. Cut all trees over 2" at stump height, except do not cut any cedar.</p> <p><u>Specs:</u></p> <p><u>Other</u> Buffer Camp 11 Creek and the feeder to it appropriately.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Regen survey as per work instructions.</p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</p>										
20	32265020-Cut	12.2	4130 - Aspen	High Density Log	50		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut, leaving submerchantable conifer and retention patches along the west and east edge of the stand.</p> <p><u>Specs:</u></p> <p><u>Other</u> Retention should amount to 5% and contain some larger wind-firm white spruce.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Regen survey as per work instructions.</p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</p>										
23	32265023-Cut	31.1	4319 - Mixed Upland Forest	High Density Log	87		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Cut all aspen, birch, and maple. Cut spruce and fir greater than 6" diameter at stump height. Buffer Camp 11 creek appropriately. On the west side of the stand is a .8 acre spruce depression that is to be clearcut with this stand.</p> <p><u>Specs:</u></p> <p><u>Other</u> Retention should be 10% and be in patch form of large, overmature aspen, preferably those with obvious holes, and wind-firm spruce.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Regen survey as per work instructions.</p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</p>										
25	32265025-Cut	2.6	6122 - Black Spruce	High Density Pole	87		Harvest	Clearcut with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut leaving approx. 10 trees, using a mix of the species present in the stand.</p> <p><u>Specs:</u></p> <p><u>Other</u> Retention may be less than 3%.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Regen survey as per work instructions.</p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</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
26	32265026-Cut	5.0	42330 - Upland Fir	High Density Pole	53		Harvest	Seed Tree with Reserves	42330 - Upland Fir	Cmpt. Review Proposal
<u>Prescription</u> Seed tree harvest leaving approx. 2, 15 tree groups per acre that includes white spruce (if available). Cut all other trees.										
<u>Specs:</u>										
<u>Other</u> Recommend having the stand cut during snow free conditions. Spruce budworm is present in the area.										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
27	32265027-Cut	9.1	4140 - Other Upland Deciduous	Medium Density Log	60		Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Clearcut all aspen and balm leaving scattered trees along the swamp edge for retention. Recommend winter harvest to maximize sprouting.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
31	32265031-Cut	36.5	4137 - Aspen, Birch	Medium Density Log	87		Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Clearcut, cutting all trees >4" stump diameter except any red and white pine if it's present. In addition, mark some scattered, preferably along the south edge of the stand, groups of 15+ trees (all species including larger white birch and big tooth aspen).										
<u>Specs:</u>										
<u>Other</u> With budworm being present, this stand should be moved up to 2014 POW for health reasons. If it looks like it will hold then wait till 2015.										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
39	32265039_1- Cut	31.1	6121 - Tamarack	High Density Log	96		Harvest	Seed Tree with Reserves	6121 - Tamarack	Cmpt. Review Proposal
<u>Prescription</u> Seed tree harvest. Cut all trees >4" stump diameter, except cedar. Leave approximately 5-10 seed trees per acre of various species present in the stand.										
<u>Specs:</u>										
<u>Other</u> Treatment size may decrease due to buffers and areas that are too wet. Portion of the north part of stand is upland. Tamarack is being hit by eastern larch beetle and spruce is being hit by spruce budworm.										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
39	32265039-Cut	7.5	6121 - Tamarack	High Density Log	96		Harvest	Clearcut	6121 - Tamarack	Cmpt. Review Proposal
<u>Prescription</u> Clearcut leaving only the cedar. Leave appropriate buffer along Camp 11 Creek. and un-named creek to the north, making sure it contains some larger tamarack.										
<u>Specs:</u>										
<u>Other</u> There will be enough tamarack and black spruce in the buffers to seed into this stand. Cut all merchantable timber. No retention.										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
41	32265041-Cut	12.1	4319 - Mixed Upland Forest	Medium Density Log	75		Harvest	Clearcut	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Clearcut stand cutting all trees >4" at stump height. Leave scattered large aspen and spruce along edge of stand for retention of 5%, striving to										
<u>Specs:</u> leave in patches of 15 trees. Buffer Camp 11 creek appropriately.										
<u>Other</u> Spruce is being impacted by budworm, consider an early harvest.										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
44	32265044-Cut	23.4	42290 - Natural Mixed Pine	High Density Log	91	111-140	Harvest	Clearcut with Reserves	4311 - Pine, Aspen Mix	Cmpt. Review Proposal
<u>Prescription</u> Seed tree harvest this stand, leaving approx. 30-40 sq. ft/ac. in red and white pine. Concentrate leaving larger diameter pine, ie those red pine										
<u>Specs:</u> >22" @ stump height and white pine >18" @stump height. Cut all aspen, birch, maple spruce-fir.										
<u>Other</u> Note: If diplodia is found, an alternative of clearcutting and planting non-aspen regenerating areas should be approved.										
<u>Comments:</u>										
<u>Next</u> Anchor chain following harvest. Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
45	32265045-Cut	15.4	42320 - Upland Spruce	High Density Log	85		Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Clearcut, cutting all trees >4" diameter at stump height. Buffer creek accordingly. 5% retention utilizing large, overmature aspen and birch.										
<u>Specs:</u>										
<u>Other</u> Stand is somewhat rocky and has tag alder drainages through it.										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
46	32265046- Cut_small	5.6	6122 - Black Spruce	High Density Pole	85		Harvest	Seed Tree with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
<u>Prescription</u> Seed tree harvest leaving appropriate buffer along Camp 11 Creek. Leave cedar and all trees under 4" diameter at stump height and										
<u>Specs:</u> approximately 10 seed trees per acre.										
<u>Other</u> Buffer along Camp 11 creek.										
<u>Comments:</u>										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
48	32265048-Cut	7.2	4199 - Other Mixed Upland Deciduous	High Density Log	95	111-140	Harvest	Group Selection	412 - Oak	Cmpt. Review Proposal
<u>Prescription</u> Select cut down to 60 sq. ft/ac, removing at least 1/3 of the oak basal area. Cut all non-oak trees <6" stump diameter. Create gaps throughout										
<u>Specs:</u> that are 90 ft. in diameter. This will encourage oak seeding.										
<u>Other</u> The majority of this stand is already under contract and was set up with the Crystal Falls hardwood to the south.										
<u>Comments:</u> The oak stand in the Crystal Falls compartment to the south should be included in this.										
<u>Next</u> Regen survey as per work instructions.										
<u>Steps:</u>										
<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
49 32265049-Cut	3.5	4123 - Red Oak	High Density Log	95	141-170	Harvest	Group Selection	412 - Oak	Cmpt. Review Proposal

Prescription Shelterwood/group selection harvest. Remove trees <10" dbh and thin through the diameters above that to a basal area of approx 50 sq. ft.
Specs: create a few gaps at least 90 ft. in diameter.

Other Include the Crystal Falls stand to the south with this treatment.
Comments:

Next Regen survey as per work instructions.
Steps:

Proposed
Start Date: 10/01/2014

**Total Treatment
 Acreage Proposed: 265.1**



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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!

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Type!

Limiting Factor

**Total Treatment
Acreage Proposed: 0**

Report 5 – Site Conditions

Gwinn Mgt. Unit

Compartment 265

Thomas Seablom : Examiner

Year of Entry 2015

Availability for Management

Total Acres	Acres		Dominant Site Conditions	No	5C	5B	3J
	Available	Not Available					
614	613	0	Aspen	613			0
72	36	36	Lowland Conifers	36			36
35	22	13	Lowland Spruce/Fir	15		7	13
68	68		Mixed Upland Deciduous	68			
23	23		Natural Mixed Pines	23			
8	8		Northern Hardwood		8		
4	4		Oak	4			
9	9		Paper Birch	9			
12	12		Red Pine			12	
117	45	71	Tamarack	45			71
92	92	0	Upland Mixed Forest	92			0
20	20		Upland Spruce/Fir	20			
27	27		White Pine	27			
1,099	978	120	Total Forested Acres	952	8	19	120
	89%	11%	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
002	Not Available	3J: Water quality / BMPs (stream, river, or lake)	21				
Comments: Buffer along the Camp 11 Creek.							
003	Not Available	3J: Water quality / BMPs (stream, river, or lake)	13				
Comments: Buffer along Camp 11 Creek.							

Report 5 – Site Conditions

Gwinn Mgt. Unit

Compartment 265

Thomas Seablom : Examiner

Year of Entry 2015

004	Available	5B: Retention for regeneration purposes	7
Comments: Mature trees around edge of stand are providing seed source for interior portion.			
005	Not Available	3J: Water quality / BMPs (stream, river, or lake)	37
Comments: Buffer along Camp 11 Creek.			
006	Not Available	3J: Water quality / BMPs (stream, river, or lake)	51
Comments: Stand is buffer along Camp 11 and an un-named creek.			
007	Available	5B: Retention for regeneration purposes	12
Comments: Overstory is being retained as a seed source for the regenerating stand (understory).			
008	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8
Comments: Stand is being held to be treated with the adjacent aspen stand next YOE. It is a small stand that is going to be either final harvest or shelterwood cut to allow the adjacent aspen stand to expand in to it.			



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
Camp 11	Spring-Seeps, Riparian Areas	Riparian Area	SCA Removal	200.2
Comments				
Previously typed as Potential Old Growth but is a riparian corridor.				



Report 7 – 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 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.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4191 - Mixed Upland Deciduous with Conifer	Medium Density Log	22.3	87		Stand was recommended as Potential Old Growth at last entry. This stand is essentially a ridge that is bordered by a pond along almost the entire western edge of the stand. The south end of the stand grades quickly into a tamarack & black spruce stand that has several spring creeks flowing through it.
3	4130 - Aspen	High Density Sapling	30.3	16		Stand harvested summer 1997, permit #5-95 by Minerick Logging "Kates Grade ELF" sale. All oak, red and white pine, spruce and fir were left. Stand in good shape. Some open areas off of ELF ROW. Red and white pine regen present.
4	6122 - Black Spruce	Low Density Pole	1.8	87		Small spruce bog in center of aspen stand. Pole timber on edge grading down to seedlings/saplings as you get closer to the center.
6	42200 - Natural White Pine	High Density Sapling	26.6	16		Stand harvested January 1998 by Minerick Logging "Kates Grade ELF" Sale. Oak, red and white pine, spruce and fir were left. Old inventory notes indicate that a large number of white pine seedlings/saplings were present prior to cutting and that most were preserved during the operation. Notes also indicate that the site was subsequently disk trenched and planted with white pine where needed to fill in the gaps under FTP C31-377. As of 6/13/13, the majority of the white pine have been weeviled but are healthy otherwise. Most of the planted white pine appears to be south of the ELF ROW and the majority of the residual pine is to the north.
8	4319 - Mixed Upland Forest	Medium Density Log	25.6	81		The stand is a north-south running ridge that extends north and west into the adjacent compartment 262. It is a very mixed stand that is moving toward spruce-fir. Spruce budworm is in this stand. It is primarily feeding on the white spruce as well as the balsam fir. The stand is semi-open in areas.
10	6121 - Tamarack	High Density Pole	27.6	87		Stand borders a tributary of the Camp 11 creek. Timber is of harvestable age, however, there are several spring creeks throughout the stand that inhibit harvesting. Very nice tamarack and black spruce. Tamarack is 8-12", 6-8 sticks tall.
11	42210 - Natural Red Pine	Low Density Log	11.8	85	1-50	Stand cut around 1986 with the adjacent stand by Holli Forest Products under permit #6-78. Red pine and white spruce were left. Stand is currently a two aged stand with red pine logs over saplings. Understory is the featured stand.
12	4319 - Mixed Upland Forest	High Density Sapling	15.9	16		Stand was cut with adjacent stand to the north in 1997, #5-95 by Minerick Logging, "Kates Grade ELF" sale, all oak, red and white pine, spruce and fir were left. This stand has considerably more overstory spruce-fir and pine than the stand to the north.
13	6122 - Black Spruce	Medium Density Pole	4.1	87		Small stand of mature black spruce and tamarack.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
14	4134 - Aspen, Spruce/Fir	Medium Density	64.3	7		<p>Stand cut by K&K Logging (shortwood operation), timber sale #32-119-05-01, "Bryan Creek Road South Sale". The portion of the stand north of the road was cut during the summer of 2006 while the portion south of the road was cut during the summer of 2005. All oak, cherry, red and white pine, and cedar were left. Also, only those spruce with a diameter greater than 9" at stump height were cut. Some birch along the road were marked with green paint.</p> <p>The stand has a heavier spruce/fir patch component in the northern part of the stand, this is also where the majority of the pine are. This must have been where the majority of the birch was too as there are several areas where there isn't any regeneration. These areas will seed in with spruce, fir, and pine over time though.</p>
15	6122 - Black Spruce	Medium Density	1.1	40		Stand is predominantly an S3 stand, 2-3" diameter black spruce; an old bog that is filling in. Some scattered mature timber along the edge.
17	6124 - Lowland Spruce- Fir	High Density Pole	41.5	87		Some of the stand is harvestable away from Camp 11 creek. There are several small spring feeder creeks within the stand. The stand adjacent to the west in Comp 262 is an SCA for water quality.
18	6122 - Black Spruce	Medium Density Pole	6.8	86		Edge of stand is mature black spruce and tamarack. The middle of the stand is smaller diameter black spruce, fir, and tamarack.
19	4130 - Aspen	High Density Pole	123.6	28		Stand harvested between 1981-87 by Holli Forest Products, permit #6-78. Red pine and white spruce were left. Stand is predominantly all pole size now. Scattered residual red pine throughout. Red pine is seeding into the road system as well as the understory.
20	4130 - Aspen	High Density Log	12.2	50		Old inventory notes indicate this stand was cut in or around 1972 for wintering deer under FTP #68. The age of the aspen is closer to 50 however and the spruce is 73. The spruce and fir are being hit by budworm and some will be dead by the end of this growing season. There's about 10-20 ft/ac. is spruce-fir. The aspen ranges from 8-12" dbh and is 6-7 sticks tall.
21	4191 - Mixed Upland Deciduous with Conifer	Medium Density	38.3	16		<p>Stand was cut in the fall of 1997 under permit #5-95 by Minerick Logging "Kates Grade ELF" sale. Stand is primarily upland with scattered low drainages throughout. It is dominated however by balsam and balsam fir as well as tag alder in the drainage areas.</p> <p>Aspen and white spruce are lesser components. There are several acres that have not regenerated. I think that they will seed in with spruce and fir over time.</p>
22	6124 - Lowland Spruce- Fir	Low Density Pole	30.6	60		Stand borders tributary to the Camp 11 creek. Predominantly tag alder, but enough trees to meet 25% coverage.
23	4319 - Mixed Upland Forest	High Density Log	38.6	87		Rugged stand. Previous inventory comments indicate that the goal was to convert this stand to spruce-fir rather than maintain it as aspen.
25	6122 - Black Spruce	High Density Pole	2.6	87		Small depression surrounded by aspen.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
26	42330 - Upland Fir	High Density Pole	5.0	53		Small balsam fir stand.
27	4140 - Other Upland Deciduous	Medium Density Log	9.1	60		Stand is predominantly balm growing in the upland with an elevated water table. It has heavy mortality.
30	4130 - Aspen	High Density Pole	57.0	27		North part of the stand harvested between 1980-1986 first by Lowell White and later by Mark Johnson under permit #8-78. All oak, red and white pine, and spruce were left. Southern 1/3 was harvested in March 1978 by Holli Forest Products #11/77. Spec's were to cut all merchantable birch and aspen, no conifers were to be cut. Stand is now a mix of quaking aspen as well as pockets of big tooth aspen. Scattered oaks are present, primarily in the northern part of the stand. Understory is heavy to spruce and fir. Some jack pine present as well.
31	4137 - Aspen, Birch	Medium Density Log	36.5	87		Stand is a semi-rocky ridge. Spruce budworm is present in the stand. White birch are in rough shape and budworm is taking it's toll on the mature spruce.
32	4130 - Aspen	High Density Sapling	19.7	7		Stand harvested during the summer of 2006 by Nickles Logging subcontracting for Superior Michigan Hardwoods, timber sale #32-120-05-01 "Camp 11 Truck Trail Aspen". All oak, cherry, red and white pine, cedar, and ash were left. Only spruce 9" and larger at stump diameter were cut. Several birch trees along the road were also marked to leave for aesthetics. This was a shortwood operation. The majority of the birch have either died or have heavy mortality in their tops. There is a fair amount of conifer in the understory as well.
33	4130 - Aspen	High Density Pole	101.7	46		Stand was commercially cut between 1966-1970 by Evert Koskinen, permit #15/66A. All merchantable aspen, balm, birch, and fir were to be cut. Permit notes indicate that he failed to cut all of the balm. Permit #17/60A may have also had harvesting in this stand by Milo Palm. Stand has some seasonal wet areas in it, more so along the north edge. Budworm is present in the southwest portion of the stand.
35	4119 - Mixed Northern Hardwoods	High Density Log	7.6	80	141-170	Stand was cut under permit #15/66A by Evert Koskinen between 1966-1970. All aspen, balm, birch, and fir were to be cut. As old stand notes indicated, this is a mediocre quality hardwood stand and should be final harvested.
39	6121 - Tamarack	High Density Log	89.6	96		Stand buffers Camp 11 and Brown Jug (previous inventory map) Creeks. Stand contains very nice tamarack and black spruce. Heavy fir understory in places. Balm in west end of stand. Southwest corner of this stand contains some upland that borders pre-inventory stand 36. Evidence of eastern larch beetle and witches broom in the southwest part of the stand as well. Start to pick up some cedar in the southwest as well. Harvest portion(s) of this stand.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
40	4130 - Aspen	High Density Sapling	47.9	7		Stand harvested during the summer of 2006 by Nickles Logging (subcontracting for Superior Michigan Hardwoods), timber sale #32-120-05-01, "Camp 11 Truck Trail Aspen Sale". All oak, cherry, red and white pine, cedar, and ash were left. Only spruce greater than 9" diameter and larger at stump height were cut. Sale was cut as a shortwood operation. Stand is in good shape. Tag alder swale present in center of stand.
41	4319 - Mixed Upland Forest	Medium Density Log	12.1	75		Upland aspen-spruce stand previously typed as 'Q'. Stand is in severe decline. Spruce being hit by budworm.
42	4130 - Aspen	High Density Sapling	54.5	16		Stand harvested in the summer of 1997 by Minerick Logging, permit #4-95 "Snowless Christmas Aspen Block". A total of 71 birch seed trees were left in areas lacking aspen and along the Camp 11 Truck trail for aesthetics. Also all oak, red and white pine, spruce and fir were left. Longwood operation.
44	42290 - Natural Mixed Pine	High Density Log	23.4	91	111-140	Mixed natural red and white pine stand with spruce, balsam, birch, and quaking aspen. Almost pure red pine along southwestern edge. There is a small black spruce depression right in the middle of the stand as well.
45	42320 - Upland Spruce	High Density Log	15.4	85		Stand is predominantly upland with a few tag alder swales and a creek in it. Aspen and birch are in decline and is converting to a spruce-fir type.
46	6122 - Black Spruce	High Density Pole	18.2	85		Primarily a black spruce stand with some scattered tamarack and cedar (mainly along creek). It's semi-upland as well.
47	4130 - Aspen	High Density Pole	66.6	28		Stand harvested in 1985 by St. John Forest Products, permit #1-78 "Camp Eleven Sale". Oak marked with green paint was left. Stand is predominantly quaking aspen with pockets of big tooth. Oak poles exist where the oak was cut. The majority of these are in the same canopy position as the aspen. A fair amount (~200 tpa) of oak regen exists in the stand as well where the pockets of aspen have died back. There are 3 or 4 pockets within the stand where there has been some aspen decline. The current basal area in these pockets ranges from 30-40 ft. These should be monitored. There is also a trace of ash in this stand and sugar maple seedlings coming up through the understory.
48	4199 - Other Mixed Upland Deciduous	High Density Log	7.2	95	111-140	Stand was thinned in 1985 by St. John Forest Products, permit #1-78. The majority of this stand has been setup as a sale with the Crystal Falls Unit to the south. It was approved during their 2010 YOE review (documents on file). The stand is heavy to oak, and the remainder should be managed accordingly. There are sugar maple seedlings present throughout the stand, ranging from 6-24" tall.
49	4123 - Red Oak	High Density Log	3.5	95	141-170	Stand is almost pure red oak.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	50 - Water	6.3	N/A	Unspecified	
5	3102 - Grass	3.4	Yes	Low (NonForested)	Decent quality opening.
7	6220 - Alder/willow	5.9	No	Unspecified	
9	3201 - Sweet Fern	9.9	No	Unspecified	Old ELF ROW. Jack pine is beginning to seed in.
16	6220 - Alder/willow	3.6	N/A	Unspecified	
24	3301 - Low Density Deciduous Tree	7.9	No	Unspecified	Areas of tag alder, black ash, and balm. Edges might be harvestable, remainder is very wet.
28	3302 - Low Density Conifer Trees	2.4	No	Unspecified	Marsh grass, tag alder, with some scattered black spruce and tamarack.
29	622 - Lowland Shrub	8.7	N/A	Unspecified	
34	3102 - Grass	1.9	Yes	Medium (NonForested)	Good quality opening. Pretty much all grass.
36	3102 - Grass	0.9	Yes	Medium (NonForested)	Good quality opening. Pretty much all grass.
37	3102 - Grass	5.4	Yes	Medium (NonForested)	Good quality opening. Pretty much all grass.
38	3102 - Grass	1.4	Yes	Medium (NonForested)	Good quality opening. Pretty much all grass.
43	310 - Herbaceous Openland	3.1	Yes	Low (NonForested)	