



Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32290

Entry Year 2017

Acreage: 1,049

County Marquette

Management Area: Sand River Lake Plain

Revision Date: 2015-07-28

Stand Examiner: John Hamel

Legal Description:

T47N-R23W, sections 25, 36.

T47N-R22W, section 30.

Identified Planning Goals:

Habitat/vegetation and mixed use.

Soil and topography:

Glacial drainage ways, till plains, and ground moraines form topography that is nearly level to moderately steep. Soils are very poorly drained nonacid organic soils, poorly drained loamy soils, well drained loams, and poorly drained loams.

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

Mostly private ownerships. To the east are larger corporate land holdings. Land use is primarily for forest production and passive recreation.

Unique Natural Features:

The area is composed primarily of vernal forest. The headwaters to the East Branch of the Sand River and other waterways occur in this compartment.

Archeological, Historical, and Cultural Features:

Remnants of old logging camps are common in this landscape.

Special Management Designations or Considerations:

Management operations will largely be limited to winter to protect the soils and prevent site damage.

Watershed and Fisheries Considerations:

The entire compartment is located in the Sand River watershed (ELSMU). The Sand River is a designated trout stream above County Road 480 which contains native brook trout and receives a decent steelhead run each spring. A 150 foot buffer should be adhered to when working around surface water. The East Branch Sand River runs through the southern portion of the compartment. This area is limited due to being too wet, but if work is ever decided to be completed here, the designated trout stream buffer should be adhered to.

Wildlife Habitat Considerations:

Compartment 290 is found within the Sand River Lake Plain Management Area; on a Till-floored Lake Plain in northeastern Marquette County. The dominant Natural Communities are mesic northern forest and poor conifer swamps. Major forest cover types include Northern Hardwoods, Aspen, and Hemlock. Wildlife species considerations in the Sand River Lake Plain Man include managing to provide coniferous thermal cover for deer wintering complexes. The emphasis should be on hemlock in this management area as it represents approximately 20% of the WUP hemlock resource. Along with maintaining wildlife movement corridors along vernal and permanent riparian watercourses is also very important. Wildlife management issues in the management area are: habitat fragmentation; course woody debris; retain or develop large living and dead standing trees (for cavities); mesic conifer; mature forest; within-stand diversity; and deer wintering complexes.

The following have been identified as featured species for the Sand River Lake Plain Management Area: American marten, blackburnian warbler, red-shouldered hawk, and white-tailed deer.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of thin to discontinuous glacial till over bedrock. The glacial drift thickness varies between 10 and 50 feet. The Precambrian Jacobsville Sandstone sub-crops below the glacial drift. The Jacobsville was previously used as a building stone. A gravel pit is located in Section 35, and potential appears to be good. This compartment has never been leased for metallic exploration. There is no economic oil and gas production in the UP.

Vehicle Access:

Access good to the compartment but is somewhat limited internally.

Survey Needs:

No survey needs are foreseen.

Recreational Facilities and Opportunities:

There is no developed recreation in this compartment. The heaviest public use is for hunting and trapping.

Fire Protection:

Fire occurrence is low in this area due to the wet nature of the landscape.

Additional Compartment Information:

The following reports from the Inventory are attached:

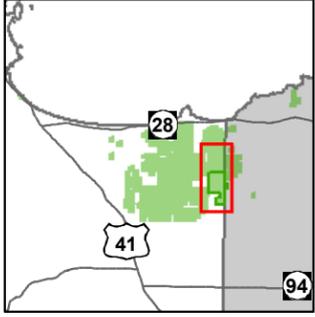
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

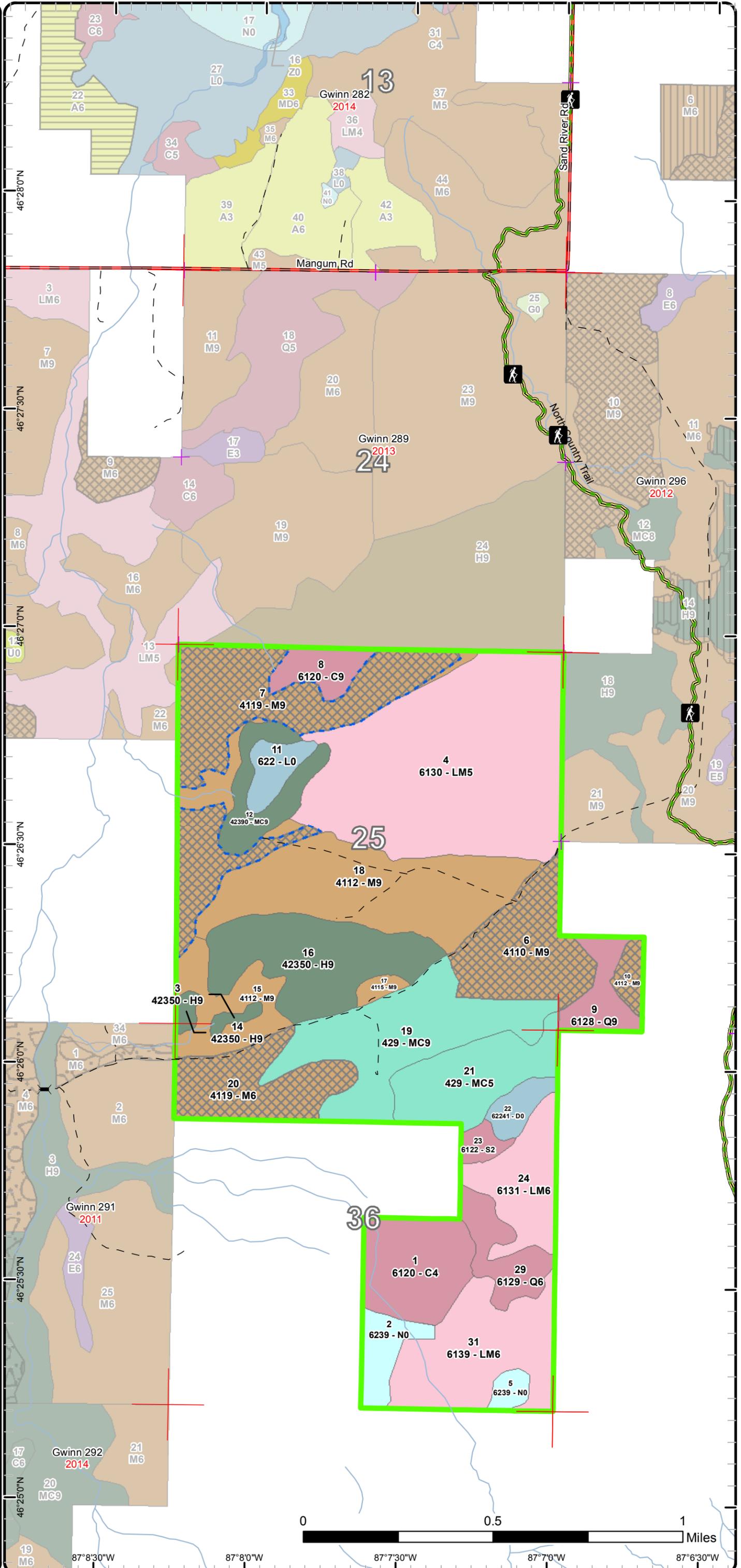
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments

Compartment: 290
 T47N, R23W, Sections. 25, 36
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Sand River Lake Plain
 YOE: 2017
 Acres: 1049 GIS Calculated
 Examiner: John Hamel
 Map Revised: 7/29/2015
 Map Phase: Pre-Review



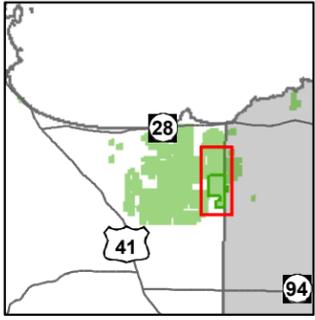
- ✚ Remonumented Section Corner
- Miris Corners
- County Gravel Roads
- - Poor Dirt Roads
- ⋯ Closed Roads
- Designated Hiking Pathways
- ⚡ Bridges
- 🚶 Hiking Trails
- Rivers
- Lakes
- ⋯ Treatments with Site Conditions
- ▨ Selection (Group, Single Tree)
- Forest Covertype
 - 411 - Northern Hardwood
 - 423 - Other Upland Conifers
 - 429 - Mixed Upland Conifers
 - 612 - Lowland Coniferous Forest
- Non-Forest Covertype
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland



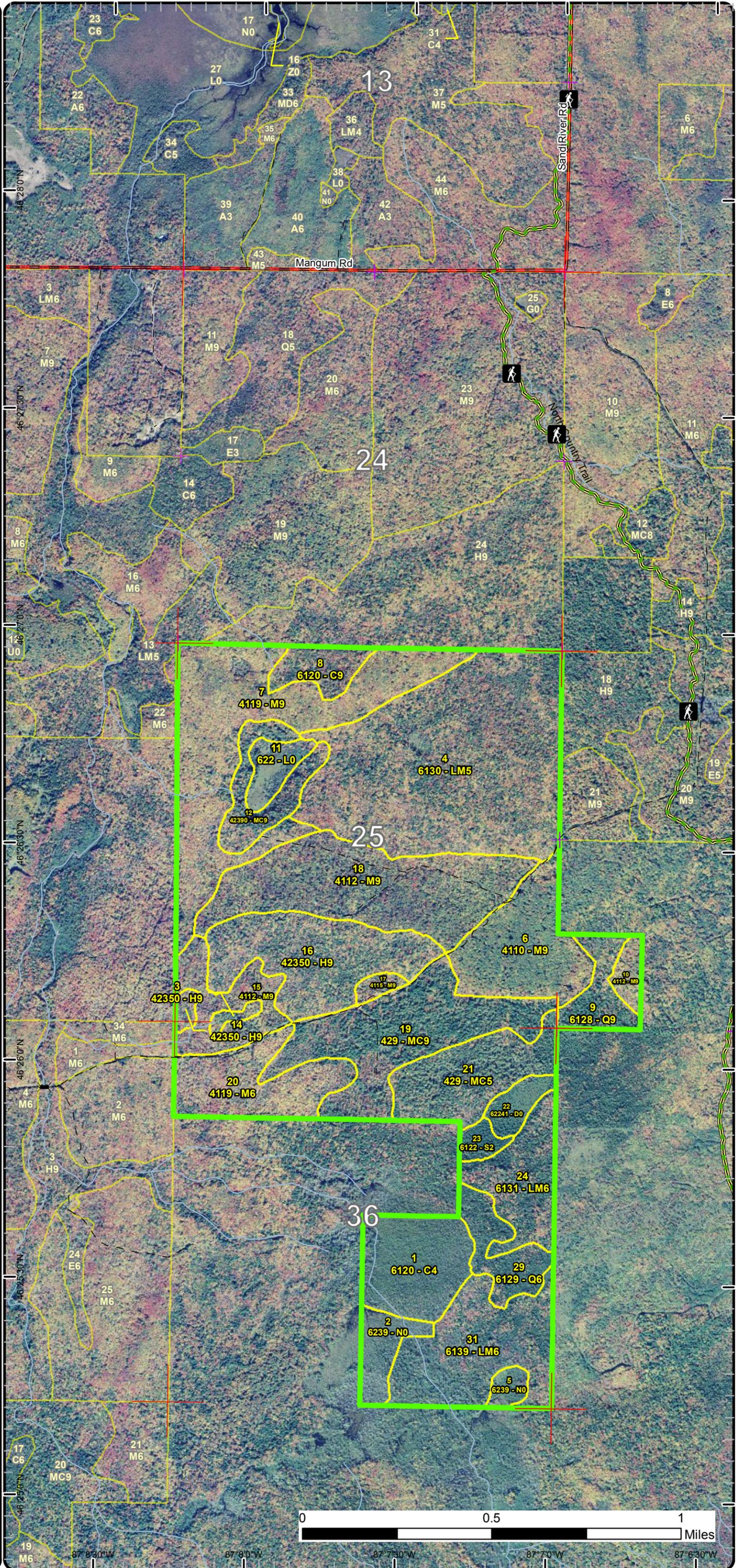
87°8'30"W 87°8'0"W 87°7'30"W 87°7'0"W 87°6'30"W

Stand Boundary Map

Compartment: 290
 T47N, R23W, Sections. 25, 36
 County: Marquette
 Unit: Gwinn
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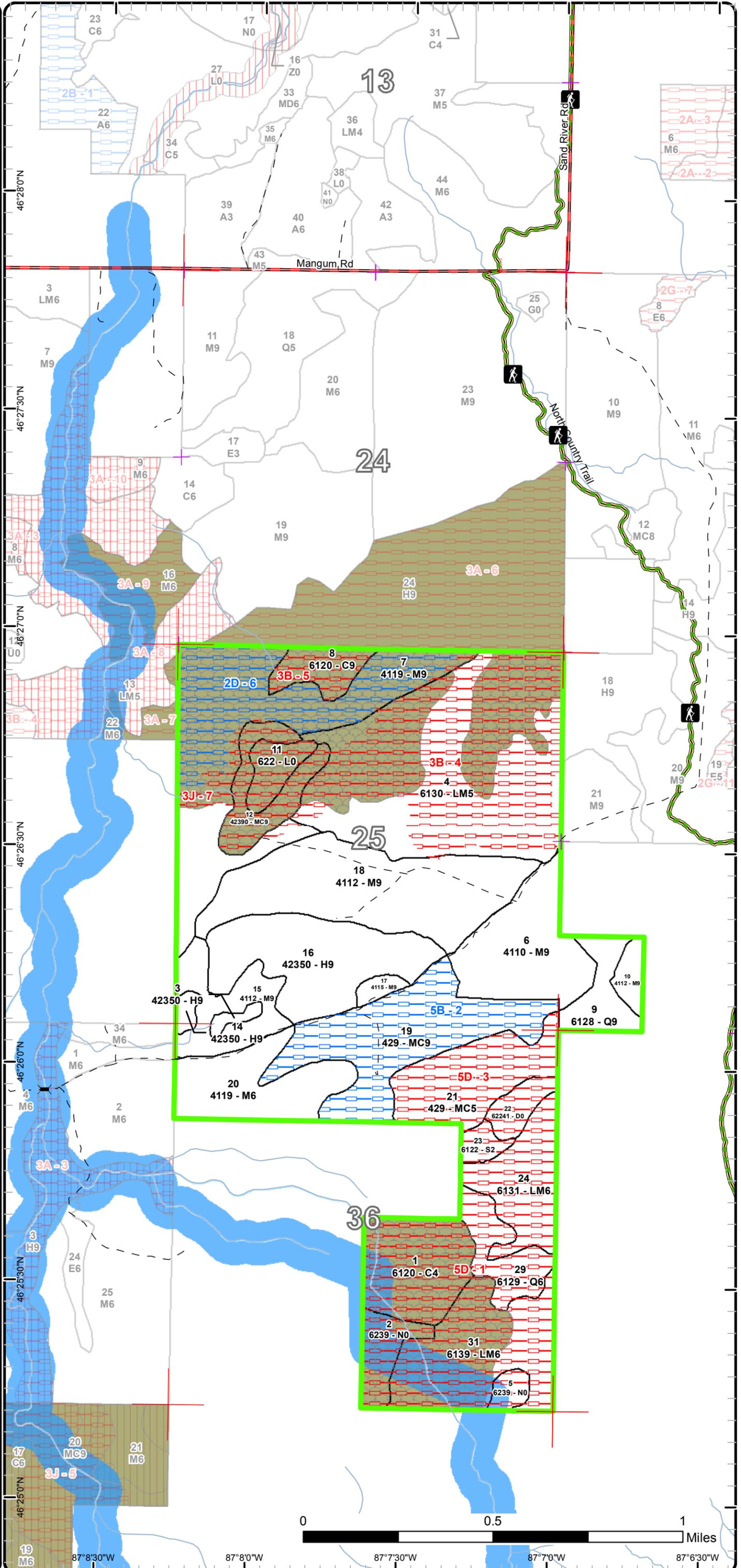
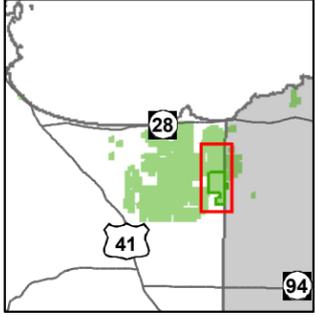


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Special Conservation Areas & Site Conditions Map

Compartment: 290
 T47N, R23W, Sections. 25, 36
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Sand River Lake Plain
 YOE: 2017
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- ✚ Remonumented Section Corner
- Miris Corners
- County Gravel Roads
- - Poor Dirt Roads
- ⋯ Closed Roads
- Designated Hiking Pathways
- ⚡ Bridges
- 🚶 Hiking Trails
- Rivers
- Stand Boundaries
- Reviewable SCAs (dq)
- Recommendation
- ⊠ SCA Removal
- Site Condition
- Available w/ Constraints
- ⊠ Unavailable
- Available Factors W/ Constraints
- 2D: Portable Bridge Needed (Dept. bridge will be adequate)
- 5B: Maintain for regeneration purposes
- Unavailable Factors
- 3B: Threatened, endangered, and special concern species/communities
- 3J: Water quality / BMPs (stream, river, or lake)
- 5D: Unproductive Forest Land
- Special Conservation Areas
- Cold Water Streams
- High Priority Trout Stream Buffer



87°8'30"W 87°8'0"W 87°7'30"W 87°7'0"W 87°6'30"W

Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Cedar	0	0	0	0	0	0	0	0	45	0	0	0	0	16	0	0	0	0	61
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76	76
Lowland Conifers	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	19	43
Lowland Mixed Forest	0	0	0	0	0	0	0	0	297	0	0	0	0	0	0	0	0	0	297
Lowland Shrub	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Lowland Spruce/Fir	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Marsh	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0	0	0	318	365
Treed Bog	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0	82	25	154
Total	47	0	0	0	0	6	0	0	366	0	47	47	0	16	0	0	82	438	1049



Report 2 – Treatment Summary

Gwinn Mgt. Unit

Year of Entry: 2017

Acres of Harvest

Compartment 290

Total Compartment Acres: 1,049

Commercial Harvest - 110
 Harvests with Site Condition - 106
 Next Step Harvest - 0
 Habitat Cut - 0

Cover Type by Harvest Method

		Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Northern Hardwood		0	217	0	0	0	0	0	0	0	217
	Total	0	217	0	0	0	0	0	0	0	217

Proposed and Next Step Treatments by Method

		Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current		217	0	0	0	0	0	0	0	0	217
Next Step		0	0	0	0	0	217	0	0	0	217
	Total	217	0	0	0	0	217	0	0	0	433



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
6	32290006-Cut	55.1	4110 - Sugar Maple Association	Sawtimber Well	110	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Selectively mark hardwoods, using marking guidelines, managing for best tree in place. Target basal area 70-90. Create canopy gaps where appropriate to establish regeneration, and maintain stand diversity. Leave obvious wildlife trees.

Next StepTreatments:Acceptable Maple and other northern hardwood speciesRegen:Other Winter Cut Old next step comments:Comment:Proposed Start Date: 10/1 /2016

7	32290007-Cut	106.4	4119 - Mixed Northern Hardwoods	Sawtimber Well	110	141- 170	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Proposal
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Habitat Cut: No**Site Condition: Portable Bridge Needed**

Prescription Selectively mark hardwoods, using marking guidelines, managing for best tree in place. Target basal area 70-90. Create canopy gaps where appropriate to establish regeneration, and maintain stand diversity. Leave obvious wildlife trees. Leave all cedar, and hemlock. Favor good quality cherry crop trees for wildlife soft mast . A 150 foot buffer should be adhered to when working around surface water.

Next StepTreatments:Acceptable Maple and other Northern hardwood speciesRegen:Other Winter Cut Old next step comments:Comment:Proposed Start Date: 10/1 /2016

10	32290010-Cut	7.9	4112 - Maple, Beech, Cherry Association	Sawtimber Well	110	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Selectively mark hardwoods, using marking guidelines, managing for best tree in place. Target basal area 70-90. Create canopy gaps where appropriate to establish regeneration, and maintain stand diversity. Leave obvious wildlife trees. Leave all cedar, hemlock, Beech, and some cherry.

Next StepTreatments:Acceptable Maple and other northern hardwood speciesRegen:Other Winter Cut Old next step comments:Comment:Proposed Start Date: 10/1 /2016

20	32290020-Cut	47.1	4119 - Mixed Northern Hardwoods	Poletimber Well	90	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Selectively mark hardwoods, using marking guidelines, managing for best tree in place. Target basal area 70-90. Create canopy gaps where appropriate to establish regeneration, and maintain stand diversity. Leave obvious wildlife trees. Leave all cedar, and hemlock.

Next StepTreatments:Acceptable maple and other northern hardwood speciesRegen:Other Winter Cut Old next step comments:Comment:Proposed Start Date: 10/1 /2016

**Total Treatment
Acreage Proposed: 216.6**

Report 5 – Site Conditions

Gwinn Mgt. Unit
John Hamel : Examiner

Compartment: 290
Year of Entry: 2017

Availability for Management

Total	Acres	Acres Avail	Acres
Acres	Available	With Condition	Not Available

Dominant Site Conditions

2D 5B 3B 3J 5D

61	0	0	61	Cedar			16		45
76	76	0	0	Hemlock					
43	19	0	24	Lowland Conifers					24
297	28	0	269	Lowland Mixed Forest			162		107
13	0	0	13	Lowland Shrub			13		
6	0	0	6	Lowland Spruce/Fir					6
23	0	0	23	Marsh					23
365	275	77	13	Northern Hardwood	77		9	4	
11	0	0	11	Treed Bog					11
154	0	82	72	Upland Conifers		82	25		47
1,049	398	159	492	Total Forested Acres	77	82	225	4	263
	38%	15%	47%	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
1	Unavailable	5D: Unproductive Forest Land	216	2G: Too wet (sensitive soils, does not include access issues)	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified
Comments:							
2	Available	5B: Maintain for regeneration purposes	82	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	5D: Unproductive Forest Land	47	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Gwinn Mgt. Unit
John Hamel : Examiner

Compartment: 290
Year of Entry: 2017

4	Unavailable	3B: Threatened, endangered, and special concern species/communities	209	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Part of an ERA							
5	Unavailable	3B: Threatened, endangered, and special concern species/communities	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Part of an ERA							
6	Available	2D: Portable Bridge Needed (Dept. bridge will be adequate)	77	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 150 feet buffer on this stream requested by fisheries							



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
POG Removal	Potential Old Growth		SCA Removal	335
Comments				
Stands do not fit the current definition of Old Growth				



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	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.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6120 - Lowland Cedar	Poletimber Poor	45.3	78	1-50	Latticed with drains that are the Headwaters to the East branch of the sand river. most areas are unproductive.
3	42350 - Upland Hemlock	Sawtimber Well	3.3	150	141-170	
4	6130 - Fir, Aspen, Maple	Poletimber Medium	189.8	75	141-170	Trace amounts of cedar, yellow birch, white pine
6	4110 - Sugar Maple Association	Sawtimber Well	55.1	110	111-140	Harvested in 2001. TS#15-97-01. Good advanced regeneration.
7	4119 - Mixed Northern Hardwoods	Sawtimber Well	120.0	110	141-170	Large remnant maples in stand. Goshawks nest in vicinity.
8	6120 - Lowland Cedar	Sawtimber Well	15.8	120	111-140	Contains seeps that drain to the north
9	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	19.1	100	81-110	
10	4112 - Maple, Beech, Cherry Association	Sawtimber Well	7.9	110	81-110	
12	42390 - Mixed Non-Pine Upland Conifers	Sawtimber Well	25.3	150	141-170	
14	42350 - Upland Hemlock	Sawtimber Well	3.6	150	141-170	
15	4112 - Maple, Beech, Cherry Association	Sawtimber Well	31.0	90	81-110	Harvested in 2013: TS# 102-07-01.
16	42350 - Upland Hemlock	Sawtimber Well	69.3	150	141-170	Pockets of Maple and balsam, amongst dense groves of hemlock. Large pockets of dense hemlock saplings included.
17	4115 - Y.Birch, Hemlock NH	Sawtimber Well	4.4	90	81-110	Harvested in 2013: TS# 102-07-01.
18	4112 - Maple, Beech, Cherry Association	Sawtimber Well	99.8	100	81-110	Harvested in 2013: TS#102-07-01.
19	429 - Mixed Upland Conifers	Sawtimber Well	81.7	150	51-80	Harvested in 2000: TS#15-97-01. Heavier Hemlock to the north of stand
20	4119 - Mixed Northern Hardwoods	Poletimber Well	47.1	90	111-140	Harvested in 2001: TS#15-97-01.
21	429 - Mixed Upland Conifers	Poletimber Medium	46.9	100	51-80	
23	6122 - Black Spruce	Sapling Medium	6.3	40	1-50	Some spruce and Tamarack trees are pole size but less than 10 BA

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Gwinn Mgt. Unit

Report 8 – Forested Stands

Compartment: 290
Year of Entry: 2017



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	6131 - Hemlock, White Pine, Maple, Birch	Poletimber Well	38.3	70	81-110	
29	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	23.9	70	51-80	
31	6139 - Mixed Lowland Forest	Poletimber Well	68.9	70	51-80	



Stand	Cover Type	Acres	Managed Site	General Comments:
2	6239 - Mixed Emergent Wetland	16.6	No	
5	6239 - Mixed Emergent Wetland	6.0	No	
11	622 - Lowland Shrub	12.6	No	Old beaver meadow. With lack of beaver activity, some areas have regenerated to spruce, cedar, white pine and other scrubs.
22	62241 - Treed Bog (OI)	10.7	No	Some seedling to sapling size spruce present, but due to poor site productivity will not become merchantable.