



Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32278

Entry Year 2018

Acreage: 1,400

County Marquette

Management Area: Palmer Moraine

Revision Date: 2016-08-08

Stand Examiner: Jason Caron

Legal Description:

T46N - R26W. Sections 31, 32, 33, 34 & 35.

Identified Planning Goals:

Timber harvest to promote regeneration and improve wildlife habitat.

Soil and topography:

Well drained soil throughout most of the compartment with rocky outcrops existing within certain areas. Topography ranges from relatively level creek bottoms, swamp conifer, tag alder, and bog/marshlands, to upland with rolling to moderately hilly terrain.

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

State ownership is intermixed with both large corporate owners (Empire Iron Mining Partners) and also relatively small private forest holdings of non-industrial private owners, both recreational and residential. Development is very limited with a few seasonal cottages plus year-round homes. Land use in the compartment consists of timber sale harvest, berry picking, hunting, trapping, and fishing.

Unique Natural Features:

The Middle Branch of the Escanaba River and its tributaries (Floppers Creek) comprise the unique natural features of this compartment. Nearly 1.5 miles of river frontage exist within the compartment with numerous scenic rapids and pools.

Archeological, Historical, and Cultural Features:

None known.

Special Management Designations or Considerations:

None known.

Watershed and Fisheries Considerations:

This compartment contains the Middle Branch of the Escanaba River which is a Type 1 trout stream greater than 50' width. For all other riparian areas, Best Management Practices should be followed to reduce erosion into waterbodies.

Wildlife Habitat Considerations:

Compartment 278 is found within the Palmer Moraine Management Area; on a Bedrock-Controlled Ground Moraine in central Marquette County. The dominant Natural Communities is boreal forests, mesic northern forests, and dry mesic northern forests. Major forest cover types include Aspen, White Pine, and Jack Pine. Wildlife priorities in this management area include maintaining white pine, red pine, and oak especially on rocky outcrops and maintaining wildlife movement corridors along riparian areas. Some of the most significant wildlife management issues in the management area are: early successional forest conditions (associated with alder, riparian zones, or forested wetlands), mast (hard and soft); mature forest (coniferous and deciduous stands); retention or development of large living and dead standing trees (for cavities), and mesic conifer.

The following have been identified as features species for the Palmer Moraine Management Area: American woodcock, black bear, pileated woodpecker, and red crossbill.

Mineral Resource and Development Concerns and/or Restrictions

Sections 31-35, T46N R26W, Marquette County

Surface sediments are thin to discontinuous in the area. Where glacial drift is present, it consists of glacial outwash sand and gravel, postglacial alluvium, and coarse-textured till. The glacial drift thickness varies between 0 and 60 feet. Archean granite/gneiss subcrops below the glacial drift. This rock could be used as dimension stone. There is no evidence of sand/gravel pits nearby, but there appears to be some potential. Abandoned iron mines are located three miles to the southeast and just over six miles to the north. Section 33 was previously leased in the 1980s for metallic mineral exploration and development. There is no economic oil and gas production in the UP.

Vehicle Access:

Access to this compartment is good with both paved roads and gravel roads providing access to the majority of the compartment. Two track dirt roads provide access within the interior part of the compartment.

Survey Needs:

No survey needs for this YOE.

Recreational Facilities and Opportunities:

No recreational facilities exist within the compartment. Recreational opportunities consist of hunting, fishing, trapping, berry picking, etc.

Fire Protection:

Sections 34 & 35 of this compartment are included within the Sands Zone Dispatch area which provides for a pre-planned dispatch of fire equipment from both the Gwinn and Ishpeming Field Offices. Areas of jack pine cover types with the encroachment of both seasonal and residential dwellings have warranted this pre-planning. The remainder of the compartment (sections 31, 32 & 33) are within the normal fire protection & response area of the Gwinn Mgt. Unit.

Additional Compartment Information:

The following reports from the Inventory are attached:

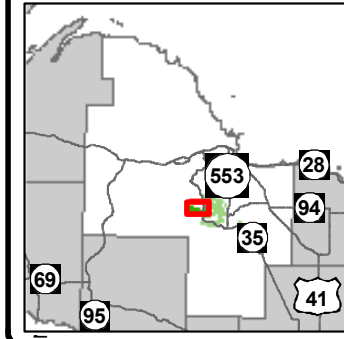
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

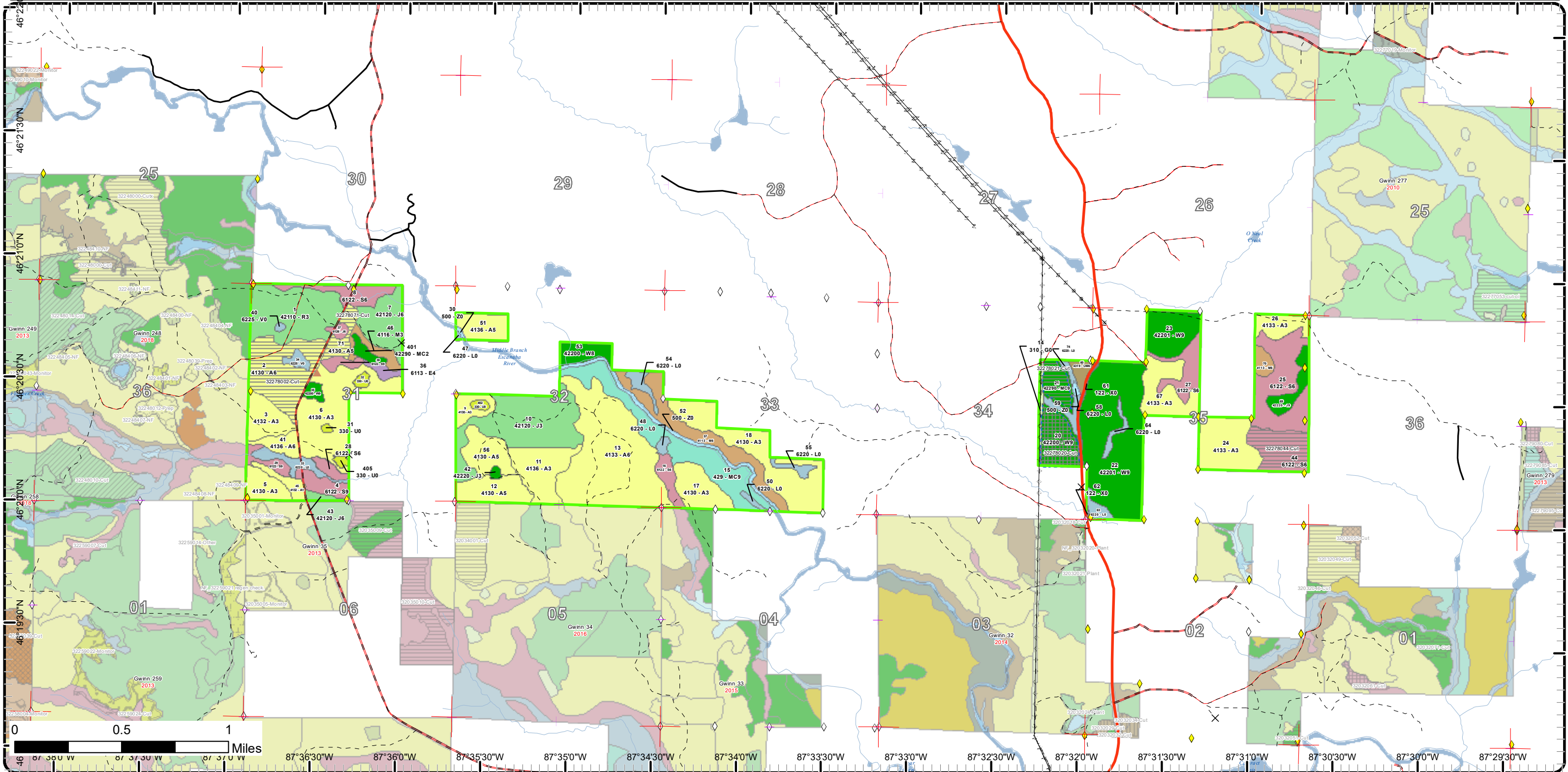
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Overview Map

Compartment: 278
 T46N, R26W, Sec: 31-35
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Palmer Moraine
 YOE: 2018
 Acres: 1400.2 GIS Calculated
 Examiner: Jason Caron
 Map Revised: 2/8/2017
 Map Phase: Post-Review

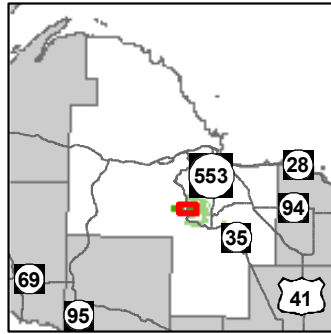


- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- X Gate
- ▲ Berms
- Highway
- Paved Roads
- County Gravel Roads
- Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Rivers
- Pipeline
- Compartment Boundary
- Treatments with Site Conditions
- Clearcut (w/Reserves)
- Seed Tree (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- Lakes

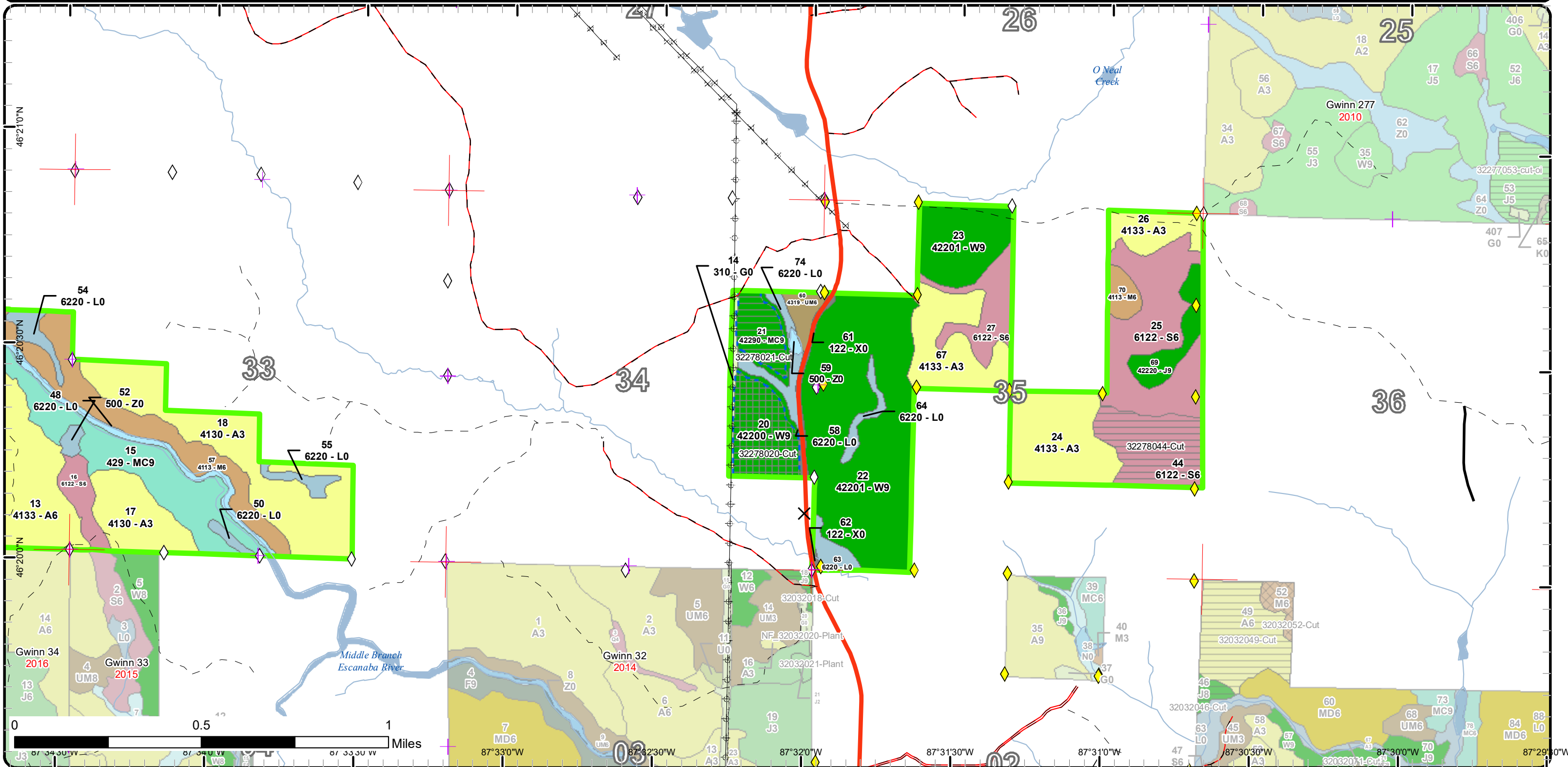


Cover Type & Treatments Map

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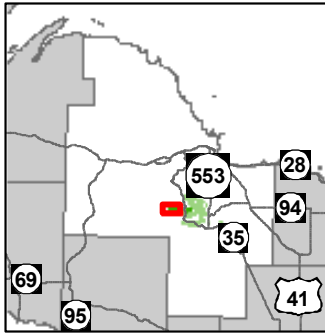


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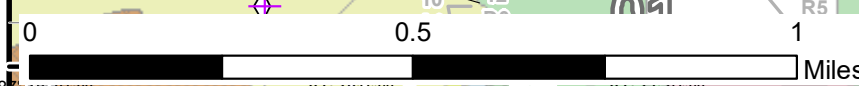
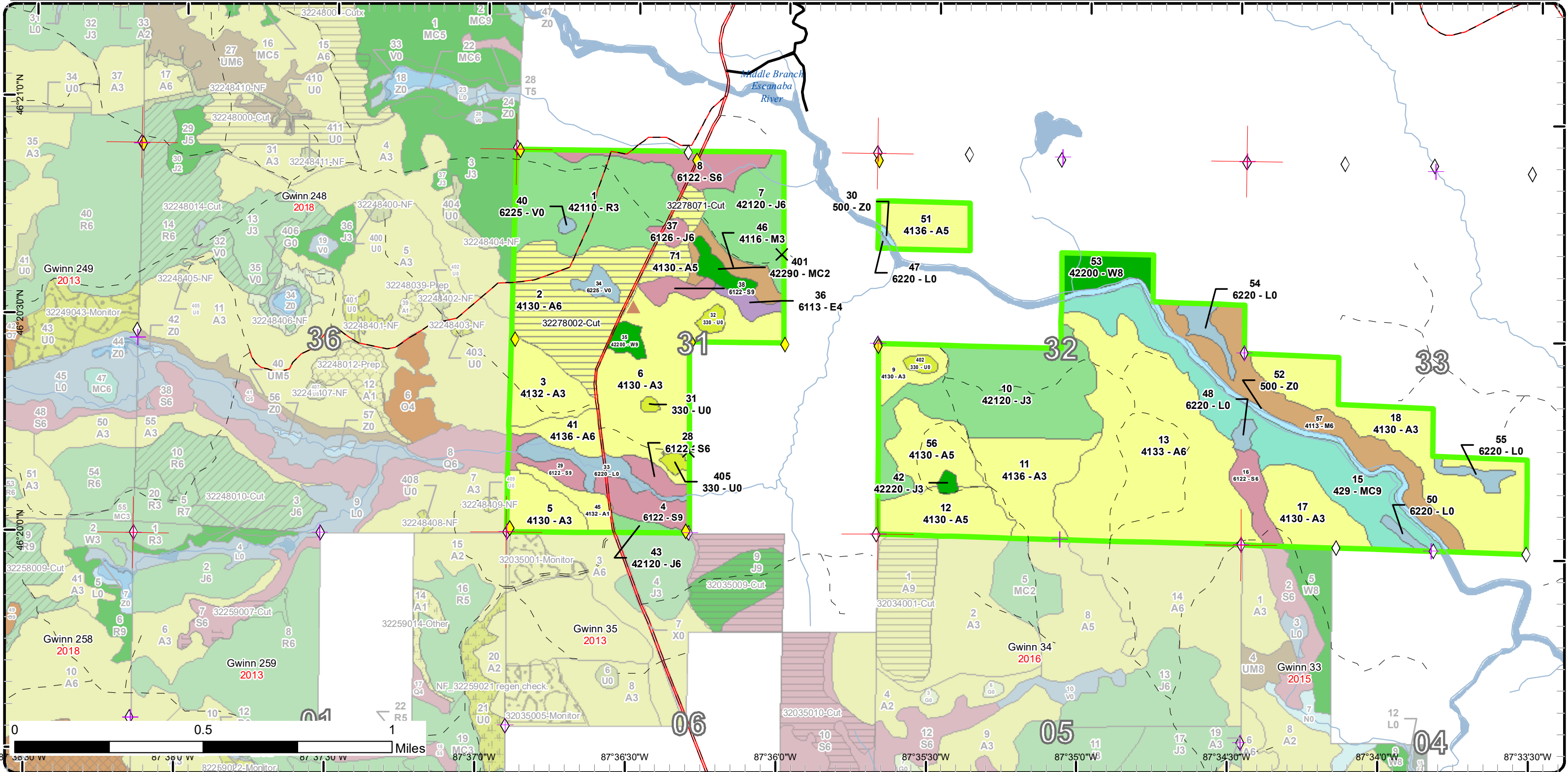


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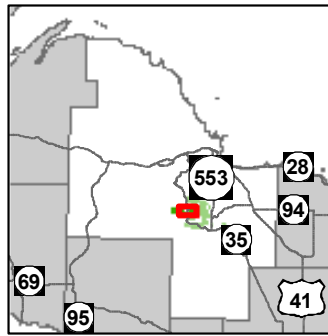
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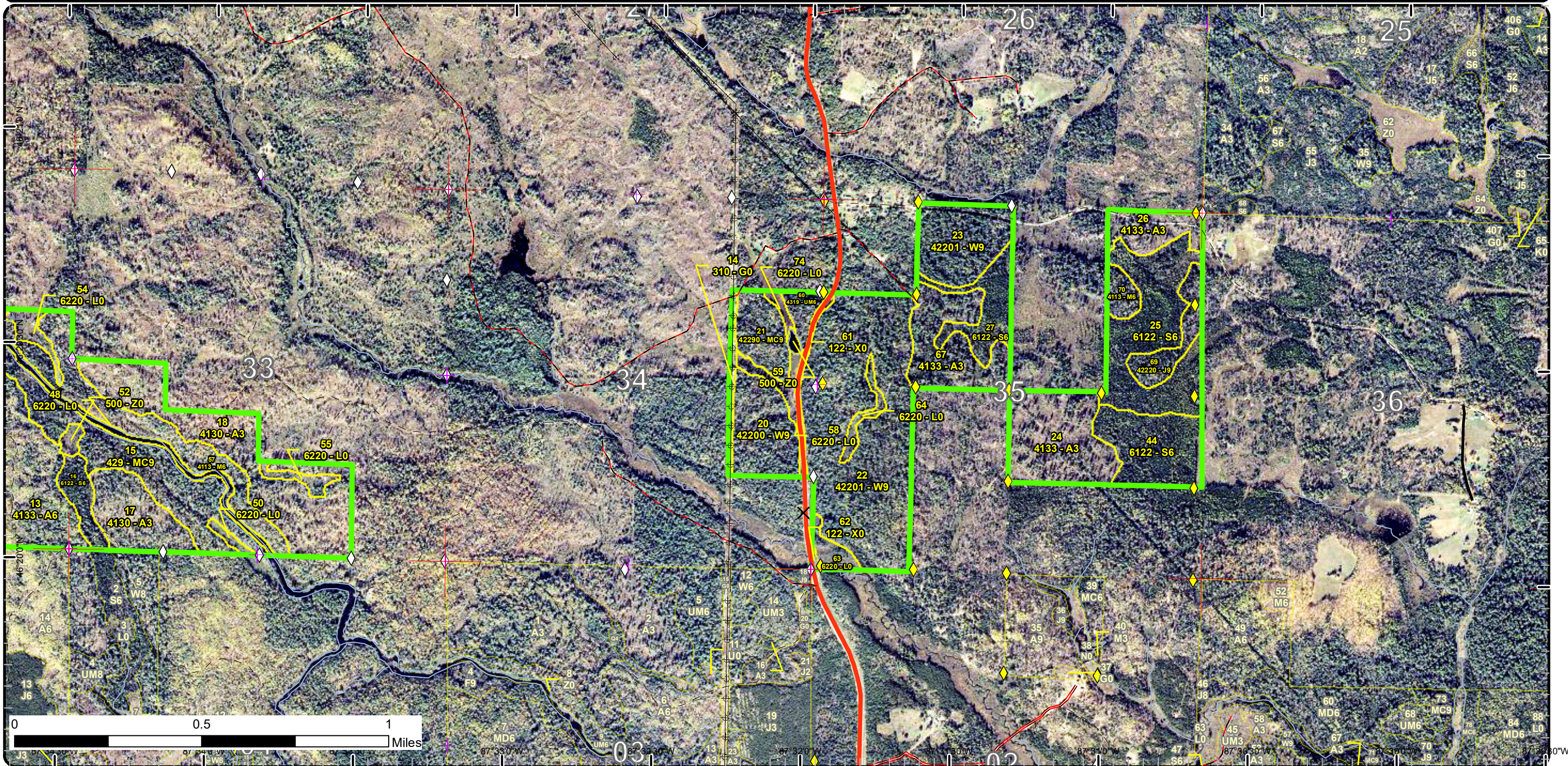
87°38'30"W 87°38'00"W 87°37'30"W 87°37'00"W 87°36'30"W 87°36'00"W 87°35'30"W 87°35'00"W 87°34'30"W 87°34'00"W 87°33'30"W

Stand Boundary Map

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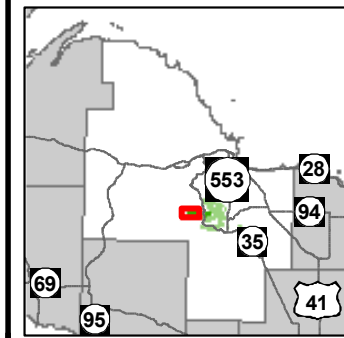


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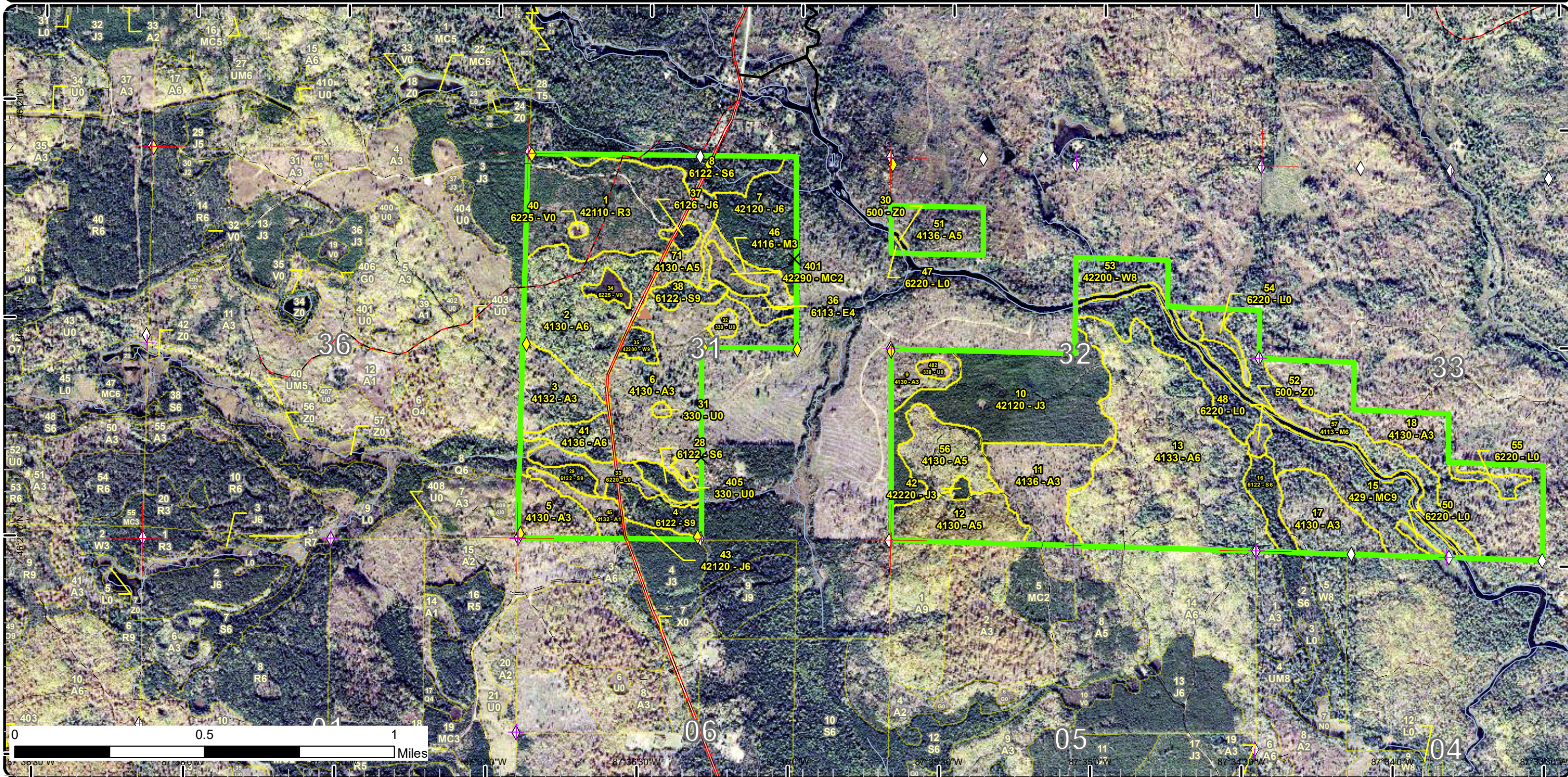


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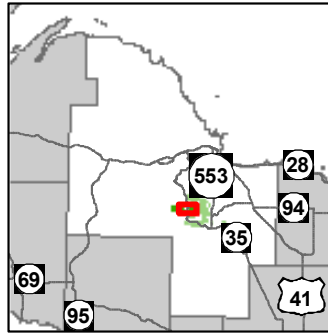


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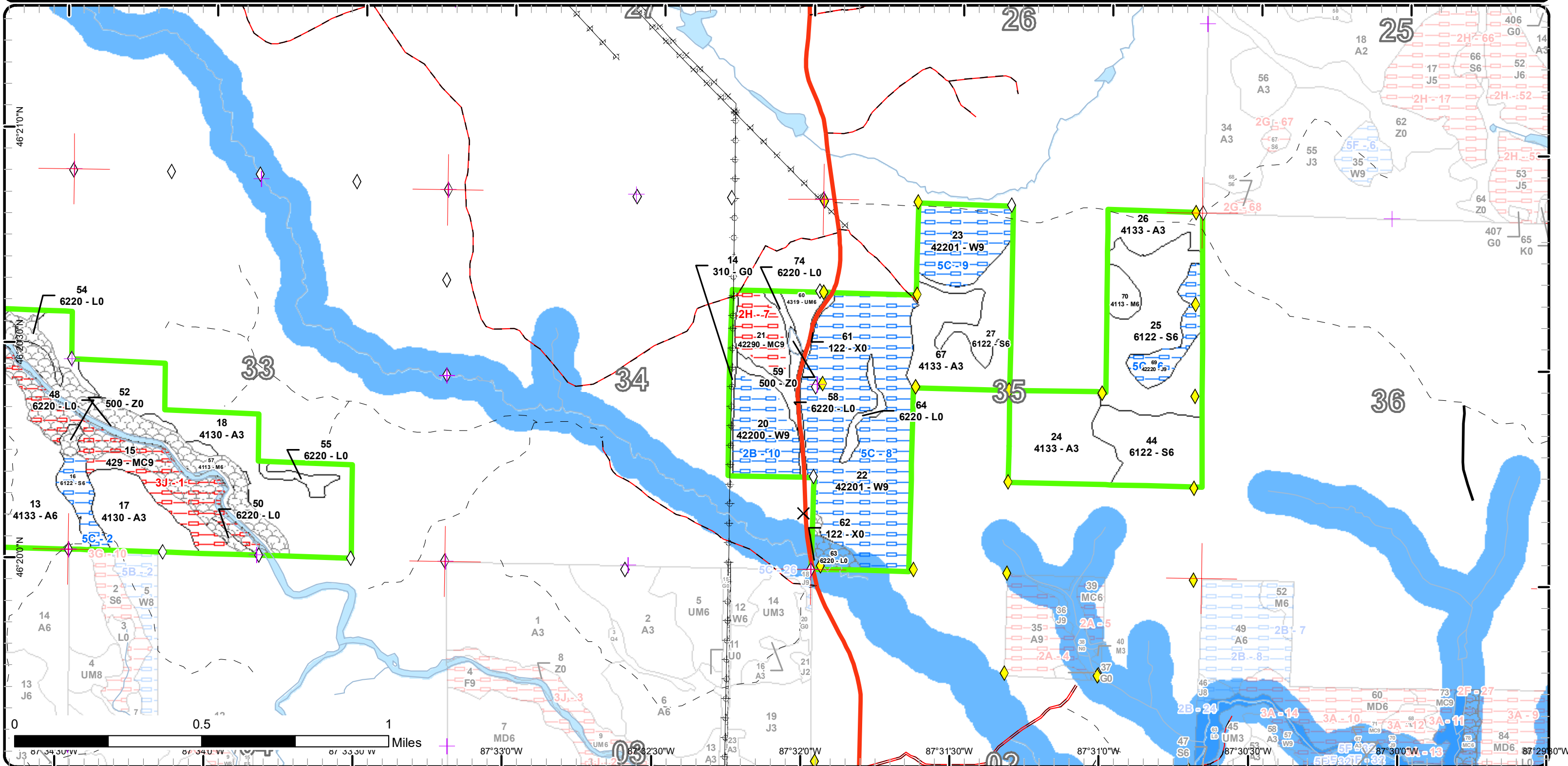


Special Conservation Areas & Site Conditions Map

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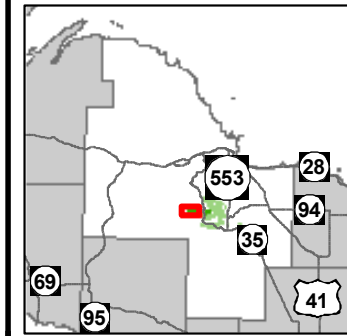


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- Available w/ Constraints
- Unavailable
- 2B: Unknown if access through adjacent landowner(s) is possible
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3J: Water quality / BMPs (stream, river, or lake)
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Riparian Area

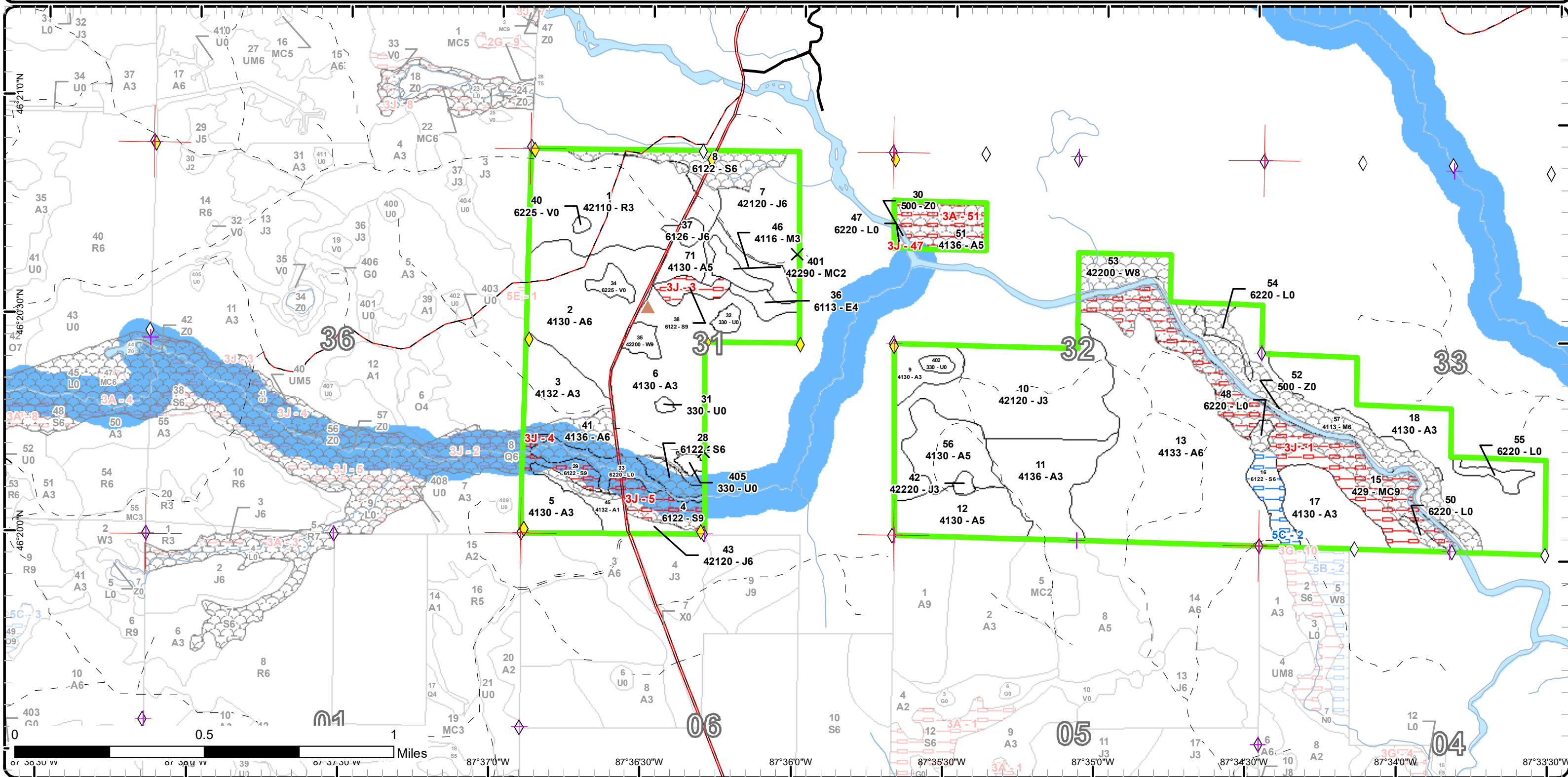


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- Rivers
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- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 3A: Potential old growth / biodiversity
- 3J: Water quality / BMPs (stream, river, or lake)
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



Report 1 – Total Acres by Cover Type and Age Class

Gwinn Mgt. Unit

Compartment 278 Year of Entry 2018

Jason Caron : Examiner



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
Aspen	0	200	96	60	181	66	0	0	18	0	0	0	0	0	0	0	0	0	620
Bog	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Herbaceous Openland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Jack Pine	0	0	0	111	3	0	0	0	14	0	0	0	0	0	0	0	0	0	128
Low-Density Trees	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Lowland Deciduous	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	4
Lowland Shrub	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
Lowland Spruce/Fir	0	0	0	0	0	0	19	0	87	32	25	0	0	0	0	0	0	0	163
Natural Mixed Pines	0	0	6	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	22
Northern Hardwood	0	0	0	10	0	0	48	0	0	0	0	0	0	0	0	0	0	0	58
Red Pine	0	0	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	64	0	0	0	0	0	64
Upland Mixed Forest	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Water	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
White Pine	0	0	0	0	0	0	0	0	0	0	0	150	30	0	0	0	0	13	193
Total	81	200	164	181	184	72	67	5	119	32	25	166	94	0	0	0	0	13	1401



Report 2 – Treatment Summary

Gwinn Mgt. Unit

Year of Entry: 2018

Acres of Harvest

Compartment 278

Total Compartment Acres: 1,400

Commercial Harvest - 98
 Harvests with Site Condition - 39
 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
Aspen	66	0	0	0	0	0	0	0	0	66
Lowland Spruce/Fir	32	0	0	0	0	0	0	0	0	32
Natural Mixed Pines	13	0	0	0	0	0	0	0	0	13
White Pine	0	0	0	25	0	0	0	0	0	25
Total	112	0	0	25	0	0	0	0	0	137

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	137	0	0	0	0	0	0	0	0	137
Next Step	0	0	0	0	0	0	137	0	0	137
Total	137	0	0	0	0	0	137	0	0	274



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
2	32278002-Cut	54.6	4130 - Aspen	Poletimber Well	42	Unspec ified	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Clearcut with reserves. Numerous vernal/wet areas exist within the stand. Red line out these areas. The buffers around these areas will serve as the retention pockets. Do not cut oak, pine, cedar, and yellow birch.

Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable aspen, spruce, fir, pine, birch, oak, maple.
Regen:

Other Allow the stand to regenerate back to aspen.
Comment:

Proposed Start Date: 10/01/2017

20	32278020-Cut	25.3	42200 - Natural White Pine	Sawtimber Well	106	141- 170	Harvest	Seed Tree with Retention	4220 - Natural White Pine	Two-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition: Unknown Access**

Prescription Perform a seed tree harvest on the stand. No cut on oak and red pine. Mark out white pine to leave or mark to cut. Do not cut white pine that are over 26" DBH. Put a 2" diameter spec on the sale. Red line out wet areas and drainages, if they exist. Healthy white birch should be retained within the stand.

Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable pine, oak, maple, aspen, spruce and fir.
Regen:

Other Rugged ground. Stand boundary may change due to drainages or rocky areas.
Comment:

No oversized WP should be harvested (Ave. DBH 22) – B. Bear, Health paper birch should be retained (5%) – P. Woodpecker

Proposed Start Date: 10/01/2017

21	32278021-Cut	13.4	42290 - Natural Mixed Pine	Sawtimber Well	106	81-110	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition: Blocked by Obstacle**

Prescription Clearcut with reserves. Retain some of the larger white pine for seed trees. Red line out a patch of mature timber to meet retention guidelines.

Specs:

Retention should include some larger aspen.

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable aspen, maple, spruce, fir, pine, oak, hemlock.
Regen:

Other Retain all oak (2% of stand), retention should include some larger aspen for cavity nesters.
Comment:

Proposed Start Date: 10/01/2017

44	32278044-Cut	32.2	6122 - Black Spruce	Poletimber Well	86	Unspec ified	Harvest	Clearcut with Retention	6139 - Mixed Lowland Forest	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clearcut with reserves. Red line out patches of mature timber to meet retention guidelines. Leave some (island) retention within the middle of the stand to serve as a seed source, if possible. Do not cut cedar.

Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable spruce, fir, tamarack, cedar.
Regen:

Other Retain all cedar (15% of stand) – Crossbill and deer, Island retention including spruce will be good for crossbill
Comment:

Proposed Start Date: 10/01/2017



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
71 32278071-Cut	11.4	4130 - Aspen	Poletimber Medium	40	Unspecified	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Clearcut with reserves. Do not cut oak and pine. Red line out a patch of mature timber for retention purposes.

Specs:

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable aspen, spruce, fir, pine, birch, oak, maple.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

Total Treatment Acreage Proposed: 136.9

Report 4 – Site Conditions

Gwinn Mgt. Unit
Jason Caron : Examiner

Compartment: 278
Year of Entry: 2018

Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available		Dominant Site Conditions					
		With Condition				2B	5C	2H	3A	3J	
620	602	0		18	Aspen					18	
5	5	0		0	Bog						
4	4	0		0	Herbaceous Openland						
128	114	14		0	Jack Pine		14				
8	8	0		0	Low-Density Trees						
5	5	0		0	Lowland Deciduous						
44	44	0		1	Lowland Shrub						1
163	128	10		25	Lowland Spruce/Fir		10				25
22	9	0		13	Natural Mixed Pines				13		
58	58	0		0	Northern Hardwood						
62	62	0		0	Red Pine						
63	0	0		63	Upland Conifers						63
6	6	0		0	Upland Mixed Forest						
5	5	0		0	Urban						
15	15	0		0	Water						
192	19	173		0	White Pine	25	147				
1,400	1,083	196		121	Total Forested Acres	25	171	13	18		89
	77%	14%		9%	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	3J: Water quality / BMPs (stream, river, or lake)	64	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stand acts as a buffer against the middle branch of the Escanaba river.							
2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Hold this stand until the adjacent stand to the west gets cut (stand 13). Parts of this stand may not be harvestable due to wet ground.							

Report 4 – Site Conditions

Gwinn Mgt. Unit
Jason Caron : Examiner

Compartment: 278
Year of Entry: 2018

3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: A small stream flows through the stand, more towards the east side.							
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stand acts as a buffer against Floppers Creek.							
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stand acts as a buffer to Floppers Creek.							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Harvest with adjacent stand (stand 25) when it is ready.							
7	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments: When setting up stand to the south look at this stand for potential harvest. Low areas and steep terrain may make this stand inoperable.							
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	118	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Basal area of pine is low and the understory is not merchantable to harvest. Allow the stand to mature further and then consider a harvest.							

Report 4 – Site Conditions

Gwinn Mgt. Unit
Jason Caron : Examiner

Compartment: 278
Year of Entry: 2018

9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	30	Unspecified	Unspecified	Unspecified	Unspecified
Comments: The basal area of pine is low, 30-40 square feet in most locations. Allow the understory to mature further and then consider a harvest.							
10	Available	2B: Unknown if access through adjacent landowner(s) is possible	25	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Access to this stand is from the south. I need to send a letter to see if the landowner will let us use his road. Also, in looking at the plat book I found that this 40 acre parcel of state land has undivided interest. 1/8th of the state land is owned by Mark Plant. I will need to send him a letter as well.							
47	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	1	3G: Other Influence zones - See comments	Unspecified	Unspecified	Unspecified
Comments:							
51	Unavailable	3A: Potential old growth / biodiversity	18	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							



Report 5 – 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
	Potential Old Growth		SCA Removal	13
Comments				
This area no longer meets the criteria to be classified as a Special Conservation Area.				
	Potential Old Growth		SCA Removal	36
Comments				
This area no longer meets the criteria to be classified as a Special Conservation Area.				
	Potential Old Growth		SCA Removal	54
Comments				
This area no longer meets the criteria to be classified as a Special Conservation Area.				



Report 6 – 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 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:
1	42110 - Planted Red Pine	Sapling Well	61.7	17	Immature	Stand of planted red pine mixed with a few volunteer jack pine. Jack pine is poorer quality. A few frost pockets exist within the stand which are stunting some of the red pine. Overall, the stand is in good condition. Former OI notes: FTP #C31-404 covered herbiciding, disk trenching, and planting to red pine (contract hand planting). In August 2000, Steve Arkens sprayed the stand with Tordon 101 herbicide to knock back the aspen, cherry; maple. At Steve's recommendation, the area south of the Hawkins Pond Road was then prescribe burned in Oct. of 2000, and subsequently the entire sale was planted to red pine.
2	4130 - Aspen	Poletimber Well	54.6	42	Unspecified	Stand was cut sometime in the early 70's with two different sales according to OI notes. A fair amount of smaller diameter aspen and red maple exist.
3	4132 - Aspen, Jack Pine	Sapling Well	21.9	28	Immature	Stand was cut in 1989. TS#01-88. Stand consists of off-site aspen mixed with jack pine and a few scattered mature white pine. Jack pine looks more healthy than does the aspen.
4	6122 - Black Spruce	Sawtimber Well	12.2	96	Unspecified	Stand provides a riparian buffer for the Floppers Creek. Stand consists of decent quality black spruce. Small flowages exist throughout the stand
5	4130 - Aspen	Sapling Well	16.2	24	Immature	Stand was cut in 1993. TS #6-93. Stand consists of aspen regeneration with mature log sized oak scattered throughout. Stand is in good condition.
6	4130 - Aspen	Sapling Well	69.8	16	Immature	Stand was cut in '01. TS#122-99. Stand consists of fully stocked aspen regeneration. Some parts of the stand have very healthy looking aspen regeneration while other areas look poorer (off-site aspen).
7	42120 - Planted Jack Pine	Poletimber Well	30.7	25	Immature	Stand was planted in 1992. Stand consists of good quality, healthy, jack pine. A few pockets of quaking aspen, white pine, and red maple. Exposed rock in places in the east part of the stand.
8	6122 - Black Spruce	Poletimber Well	17.5	72	81-110	A unique stand. The southern half consists of lowland black spruce. The NE corner of the stand contains a huge rock outcrop. A small stream flows through the middle part of the stand.
9	4130 - Aspen	Sapling Well	10.6	26	Immature	Was cut in 1990 - 91. TS#15-88-1. Stand consists of young aspen. Aspen is poorer quality. A few 6" dbh oak scattered within the stand.
10	42120 - Planted Jack Pine	Sapling Well	75.2	24	Immature	FTP C31-251 covered herbiciding, disk trenching, and contract hand planting of jack pine. Planting done in Spring 1993. - Stand consists of dense, good quality jack pine. The # of trees per acre appear to be high when walking through the stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
11	4136 - Aspen, Mixed Conifer	Sapling Well	35.8	5	Immature	Stand was cut in 2012: TS# 121-08-01. Stand consists of aspen of decent quality. Sub-merchantable red maple scattered throughout the stand. White pine scattered throughout as well. Pockets of young jack pine exist. Stand should fill in more as it gets older. Overall, there is more retention of white pine, black spruce and red maple within the southern half of the stand than the north half.
12	4130 - Aspen	Poletimber Medium	25.6	38	Unspecified	Stand was cut in 1978-79. TS# 3/78A. I split the original aspen stand in half due to the change in aspen type from quaking to big tooth, and from a stand quality perspective. This stand consists primarily of big tooth aspen that is mixed with log sized red oak. The aspen is very good quality and can hold for at least another 10 years.
13	4133 - Aspen, Mixed Pine	Poletimber Well	130.7	38	Unspecified	Stand was cut in 1978-79. TS# 3/78A. Stand consists of good quality aspen. A few scattered mature oak and clumps of mature white pine within the stand.
15	429 - Mixed Upland Conifers	Sawtimber Well	63.5	111	81-110	This stand provides a riparian buffer for the Middle Branch of the Escanaba River. The stand consists of climax species with large diameter white pine and red pine scattered throughout. Red pine and white pine are good quality! Numerous natural canopy gaps exist throughout the stand, within these gaps a mix of deciduous and conifer species exist.
16	6122 - Black Spruce	Poletimber Well	10.2	79	Unspecified	Lowland stand of black spruce mixed with tamarack and white pine. Stand is healthy and is holding up well.
17	4130 - Aspen	Sapling Well	26.6	17	Immature	Stand was cut in 2000. TS #126-98. Stand consists of good quality aspen with residual log sized pine and oak scattered throughout the stand. Some young oak has regenerated along with some white pine.
18	4130 - Aspen	Sapling Well	66.1	8	Immature	Stand was cut in 2009. TS#122-08. Stand consists of diverse regeneration. Regen looks very healthy. Scattered mature white pine and oak were left within the stand. Nice white pine regeneration exists as well.
20	42200 - Natural White Pine	Sawtimber Well	27.2	106	141-170	Stand consists of large diameter white pine with pockets of merchantable red maple and paper birch. Paper birch is falling apart.
21	42290 - Natural Mixed Pine	Sawtimber Well	16.3	106	81-110	Stand of mixed conifer and deciduous. Aspen, jack pine, and red maple are old. Paper birch has fallen out of the stand. A small area of lowland in the NW corner of the stand.
22	42201 - Natural White Pine, Mixed Deciduous	Sawtimber Well	117.6	106	81-110	Stand was cut in 1977-79. TS# 5/77A. Stand has a ridge paralleling M-35 with some rock outcropping or rock ledge with shallow soils. Best pine is on higher ground. Some pockets or drainages of seasonally wetland in low areas. White pine is the climax species here and essentially in all of Sec 34 & 35. White pine and red maple are present in a variety of size & age classes, and readily seeds in whenever an opening in the canopy occurs. Significant pine regeneration present already, both naturally and as a result of past cutting.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	42201 - Natural White Pine, Mixed Deciduous	Sawtimber Well	29.7	111	81-110	Stand consists of super canopy white pine with smaller diameter red maple, paper birch and aspen within the canopy gaps. Some pockets of red maple and aspen are merchantable, others are not.
24	4133 - Aspen, Mixed Pine	Sapling Well	40.6	6	Immature	Stand was harvested in '11. TS #124-08. Stand consists of a mix of red maple and aspen. Larger diameter white pine are scattered throughout the stand.
25	6122 - Black Spruce	Poletimber Well	53.5	74	Unspecified	Small diameter black spruce with a few tamarack mixed in. Spruce and tamarack are good quality. Water table may be high and possibly leading to slower growth? There is a lot of sub-merchantable trees currently.
26	4133 - Aspen, Mixed Pine	Sapling Well	15.0	8	Immature	Stand was cut in '09. TS#123-08. All white pine were left as were marked white birch along Co. Rd. MU. Stand currently consists of a mix of regeneration amongst scattered large diameter white pine. Regeneration looks good. Stand should fill in better as it matures.
27	6122 - Black Spruce	Poletimber Well	19.1	55	Unspecified	Stand of younger black spruce mixed with some scattered tamarack. Stand is healthy and in good condition.
28	6122 - Black Spruce	Poletimber Well	5.6	72	Unspecified	The stand provides a riparian buffer for the Floppers Creek. The stand contains good quality black spruce. Stand has a few scattered blown down trees, but otherwise looks good. Stand does contain a feeder stream to the Floppers.
29	6122 - Black Spruce	Sawtimber Well	6.9	96	Unspecified	Stand acts as a riparian buffer for the Floppers Creek. Stand consists of decent quality black spruce with scattered paper birch, and tamarack.
35	42200 - Natural White Pine	Sawtimber Well	4.3	106	81-110	Eastern half of this stand was included in a commercial cut in 2001 with stand 6. TS #122-99. Western half of the stand consists of low ground, more bog like. The eastern half is high ground. Smaller diameter white pine on the west half. Large diameter white pine on the east half. Diameters on the large WP are impressive!
36	6113 - Lowland Maple	Poletimber Poor	4.5	61	Unspecified	Small stand consists of low ground with a mix of conifer and deciduous. A small stream/drainage exists within the stand that flows east to west. Low stocking exists due to wet ground. I would consider this stand a riparian area due to the stream and seeps that exist within it.
37	6126 - Lowland Jack Pine	Poletimber Well	3.1	38	1-50	A small stand of lowland jack pine mixed with black spruce. Jack pine is healthy and has good form. Stand looks to have been a bog many years ago and has now filled in with trees.
38	6122 - Black Spruce	Sawtimber Well	5.7	91	Unspecified	A small stand of black spruce and tamarack with tag alder inclusions. A small stream and seeps within the stand.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
41	4136 - Aspen, Mixed Conifer	Poletimber Well	10.8	28	Immature	Stand of mixed deciduous and conifer. Stand looks to have been picked through years ago. The notes on the aspen stand to the north state that it was cut in 1989. I'm guessing this stand was cut at the same time. The west side of the stand contains pockets of large white & red pine.
42	42220 - Natural Jack Pine	Sapling Well	1.7	24	Immature	OI notes: FTP C31-251 covered herbicide, disk trenching, and contract hand planting of jack pine. Planting done in Spring 1993.
43	42120 - Planted Jack Pine	Poletimber Well	3.6	24	Immature	Stand was cut in '93. TS #011-93-01. Was subsequently trenched & planted to jack pine. Stand consists of dense jack pine. Quality looks good.
44	6122 - Black Spruce	Poletimber Well	32.2	86	Unspecified	A stand of black spruce with a mix of tamarack and cedar. Stand does have pockets of mistletoe within it. Some blowdown has occurred within the stand.
45	4132 - Aspen, Jack Pine	Sapling Poor	8.5	5	Immature	Stand was cut in 2012: TS# 121-08-01. Stand consists of patchy regeneration. Some pockets of 2" dbh red maple exist. Stand should fill in with conifer and deciduous. Large white & red pine scattered within the stand.
46	4116 - Mixed N. Hardwood - Aspen	Sapling Well	9.6	27	Immature	Stand was cut in 1990. TS#14-88-01. Stand consists of off-site aspen that is poor in quality. Black cherry and stump sprout red maple mixed within the stand. Aspen is young but is already looking in tough shape.
51	4136 - Aspen, Mixed Conifer	Poletimber Medium	18.3	73	1-50	I was not able to get to this stand during the 2018 YOE inventory. Former OI notes state: Stand is essentially a ridge paralleling the river and sloping down to the south to the river. Timber is poor quality, white pine (some pine present but less than 10 sq.ft/acre per my sample plots) seems to be the climax species here - some natural regen. Aspen & birch dying out. Lots of hazel & hazelnuts (good bear habitat). Mining Co. land adjacent to the north has been cut fairly recently (couple of yrs ago).
53	42200 - Natural White Pine	Sawtimber Medium	13.1	81	51-80	I was not able to get to this stand during the 2018 YOE inventory period. The former OI notes had this as a white pine type.
56	4130 - Aspen	Poletimber Medium	24.2	38	Unspecified	Stand was cut in 1978-79. TS# 3/78A. Stand consists of aspen that is poorer in quality (off-site).
57	4113 - R.Maple, Conifer	Poletimber Well	41.8	51	81-110	Stand is a riparian buffer that consists of a mix of deciduous and conifer. Hazel is thick in spots along with tag alder pockets. Large white pine scattered throughout the stand.
60	4319 - Mixed Upland Forest	Poletimber Well	6.0	44	81-110	Mixed stand of deciduous and conifer. Stand is healthy and in good condition.
67	4133 - Aspen, Mixed Pine	Sapling Well	33.5	8	Immature	Stand harvested fall of 2009. TS#123-08. Stand consists of a mix of aspen, red maple, and balsam fir regeneration. The regeneration is fully stocked. Large diameter white pine exist, scattered throughout the stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
69	42220 - Natural Jack Pine	Sawtimber Well	13.7	75	Unspecified	Stand consists of mostly jack pine but has a mix of other species. Jack pine is in poor condition. There are pockets of JP that have blown down or are dead standing.
70	4113 - R.Maple, Conifer	Poletimber Well	6.3	51	81-110	Stand is growing on a rock knob with a mix of deciduous and conifer. Large diameter white pine are scattered amongst the stand.
71	4130 - Aspen	Poletimber Medium	11.4	40	Unspecified	Stand was cut from 1974-77. TS#1-74. Stand consists of off-site aspen. Red maple whips are thick in spots. Manage with the aspen stand on the west side of the road (stand 2).
401	42290 - Natural Mixed Pine	Sapling Medium	5.8	16	Immature	Grass opening was created following a commercial timber sale cut in 1990. Rockrake, disked, and seeded in July 1992. FTP # W31-241. 2016 Inventory- A former grass opening that is filling in with conifer and cherry. The stand still has some small openings within it.



Stand	Cover Type	Acres	Managed Site	General Comments:
14	310 - Herbaceous Openland	4.0	No	Power line corridor.
30	500 - Water	0.7	No	Middle Branch of Escanaba River, flows easterly. I talked to Jim Aldeton who lives just upstream from here on the north side of the river, and he told me there are northern pike in the pools below the rapids here. Probably moved up from the Cataract Basin.
31	330 - Low-Density Trees	1.0	No	OI Notes: FTP W3-612 created three small grass openings in the sale area totaling about 4 acres after the sale in August 2002. 2016 Inventory- Jack pine and red pine are starting to fill in. A carpet of sweet fern exists as ground cover.
32	330 - Low-Density Trees	2.6	No	The original timber sale created these grass openings that were then planted under FTP W3-612. These openings are now mostly sweet fern and are filling in with a few jack pine and red pine. Eventually they will be considered forested if they are not re-established.
33	6220 - Alder/willow	11.3	No	Floppers creek and it's riparian area.
34	6225 - Bog	4.2	No	A bog with scattered trees in it.
40	6225 - Bog	1.0	No	
47	6220 - Alder/willow	0.7	No	Small riparian buffer down to the river.
48	6220 - Alder/willow	2.4	No	
50	6220 - Alder/willow	2.2	No	A remote call but it appears to be a tag alder patch.
52	500 - Water	13.6	No	Middle Branch of the Escanaba River, flows easterly. Over one and a quarter miles of river flowing through this compartment.
54	6220 - Alder/willow	5.7	No	In looking at the imagery it looks like the stand is full of tag alder.
55	6220 - Alder/willow	4.2	No	Pocket of tag alder.
58	6220 - Alder/willow	5.7	No	Lowland tag alder.
59	500 - Water	1.1	No	Tiny beaver pond west of and visible from M-35.
61	122 - Road/Parking Lot	4.5	No	State highway M-35 along with cleared right of way.



Stand	Cover Type	Acres	Managed Site	General Comments:
62	122 - Road/Parking Lot	0.6	No	State highway M-35 along with cleared right of way, and Green Creek bridge.
63	6220 - Alder/willow	5.7	No	Green creek and riparian area.
64	6220 - Alder/willow	4.4	No	A narrow tag alder strip.
74	6220 - Alder/willow	2.1	No	Lowland tag alder. Outlet of beaver pond flows south along highway and crosses to east side via a culvert.
402	330 - Low-Density Trees	2.2	No	Former OI notes state the grass opening originated in 1993. Stand is now filling in with jack pine and black cherry. A carpet of sweet fern exists.
405	330 - Low-Density Trees	2.0	No	<p>OI notes: Stand was created following commercial timber sale cut in 2001. Rockrake, disked, and seeded with grasses & legumes in August 2002.</p> <p>2016- A grass opening that consists mostly of sweet fern. The stand does have a couple of jack pine and red pine scattered within it. Stand is filling in with JP & RP. I'm guessing that by the next inventory cycle it will convert to a forested stand.</p>