



Compartment Review Presentation

Shingleton Forest Management Unit

Compartment 41182

Entry Year 2018

Acreage: 1,332

County Alger

Management Area: Cusino Complex

Revision Date: 2016-08-31

Stand Examiner: Scott Kentner

Legal Description:

T47N, R17W, secs. 25, 26, 35, 36

Identified Planning Goals:

Sustainable management of forest resources, while providing for other ecological and socioeconomic values.

Soil and topography:

Carbondale-Greylock Association with Carbondale, Lupton and Tawas soils on the low, flat poorly drained portions of the compartment; and Greylock soils higher ground. The landform type is ground moraines.

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

The majority of the surrounding ownership is state land; although there is some commercial forest land to the northwest and southeast.

Unique Natural Features:

Currently under review by Michigan Natural Features Inventory (MNFI).

Archeological, Historical, and Cultural Features:

none

Special Management Designations or Considerations:

none

Watershed and Fisheries Considerations:

This compartment contains a section of Commencement Creek and the upper reaches of small tributaries to the Creighton River. All streams in this compartment are considered warm-water. Beaver are not a concern. However, standard BMP's should be implemented to control sediment sources from adjacent uplands. Fine sediments such as silt and sand negatively affect natural reproduction of fish, decrease the diversity of aquatic invertebrate and fish taxa, and result in lower overall fish populations.

Wildlife Habitat Considerations:

This compartment lies on the south side of the Sunrise snowmobile trail and is a part of an area historically known as the Cusino Deer Yard. Pre-settlement forests contained hemlock, sugar maple, yellow birch, and beech in the uplands. Lowlands were dominated by cedar, tamarack, and spruce. Current forest conditions appear to contain a similar species mix, but with a reduction in the distribution of hemlock in the uplands as found circa 1850. Lowland forests seem to be relatively unchanged in species composition.

Winter deer usage in the Cusino deer yard ceased sometime prior to 1960. Currently there are no deer wintering in this area. However, there is a long term goal to eventually manage the Petrel Deer Yard to the south in such a manner as to lure deer north into this area. Therefore the current wildlife habitat goals for this compartment include maintaining the closed canopy lowland coniferous cover and promoting structural and species diversity within the hardwood stands. Variable retention principles will be employed. This compartment lies within the Cusino Complex Management Area and the featured species within this MA are American marten, moose, American black bear, gray jay, northern goshawk, ruffed grouse, and white-tailed deer.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of coarse-textured till and peat and muck. There is insufficient data to determine the glacial drift thickness. The Ordovician Prairie du Chien (PdC) Formation subcrops below the glacial drift. The PdC could be used for stone. The nearest gravel pit is three miles to the northwest, but there should be potential on the uplands. There is no commercial oil and gas production in the UP.

Vehicle Access:

Much of the compartment is without roads.

Survey Needs:

none

Recreational Facilities and Opportunities:

The north boundary of the compartment is the Sunrise Grade snowmobile trail.

Fire Protection:

Low potential for fires; the majority of the compartment cover type is cedar, and is interspersed with small streams.
Limited access.

Additional Compartment Information:

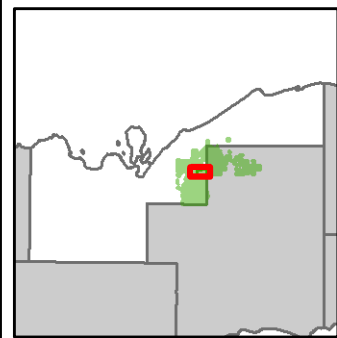
The following reports from the Inventory are attached:

- 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:

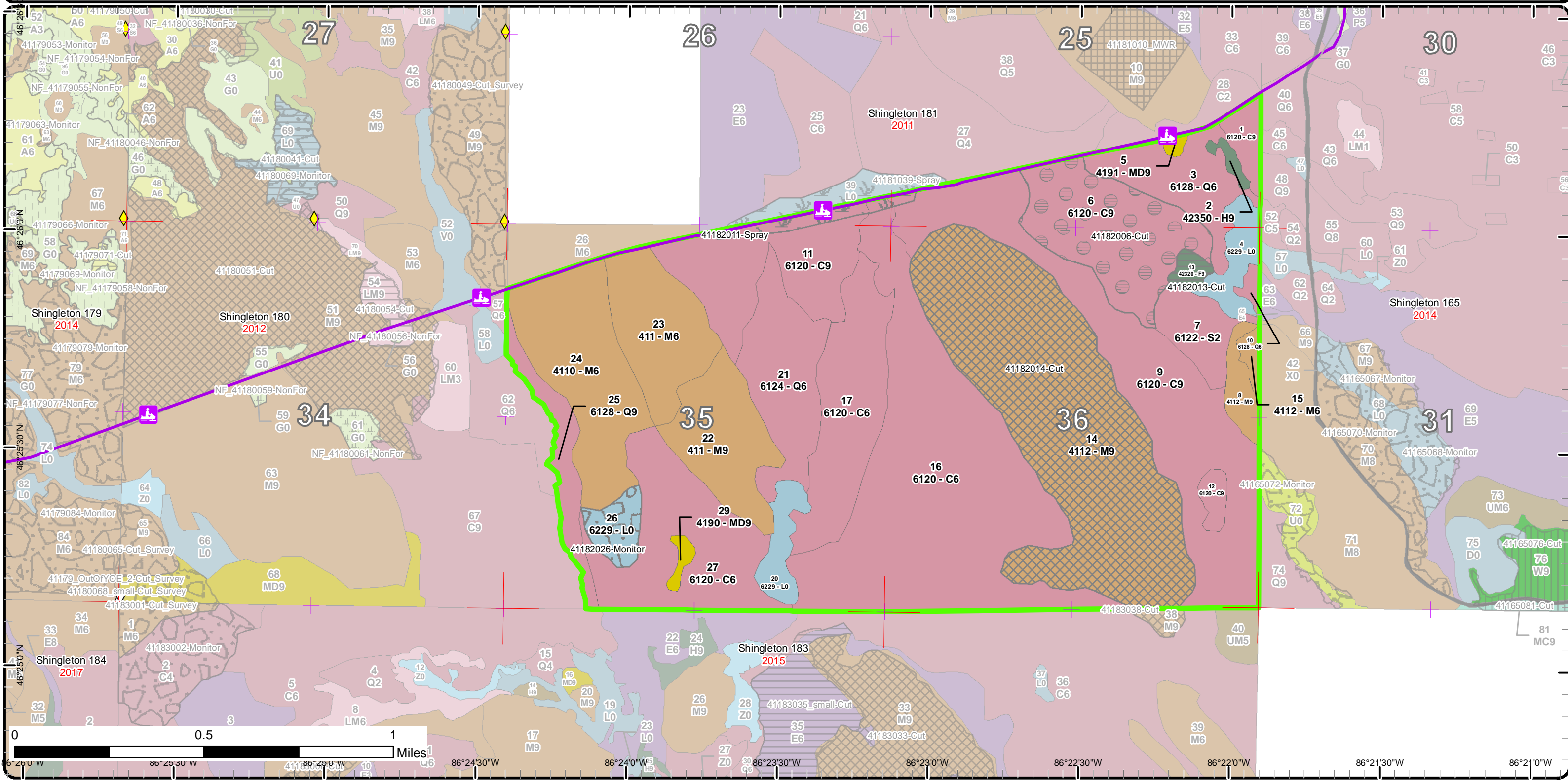
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map



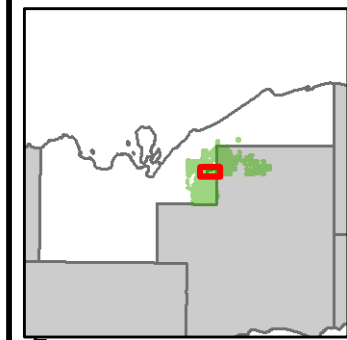
Compartment: 182
 T47N, R17W, Sec: 25, 35, 36
 County: Alger
 Unit: Shingleton
 Mgmt Area: Casino Complex
 YOE: 2018
 Acres: 1,332 GIS Calculated
 Examiner: Scott Kentner
 Map Revised: 12/6/2016
 Map Phase: Post Review

- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Snowmobile Trails
- Designated Snowmobile Trails
- Compartment Boundary
- Patch/Strip Cut (Femelschlag)
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Pesticide
- Regeneration Survey
- 411 - Northern Hardwood
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 612 - Lowland Coniferous Forest
- 622 - Lowland Shrub

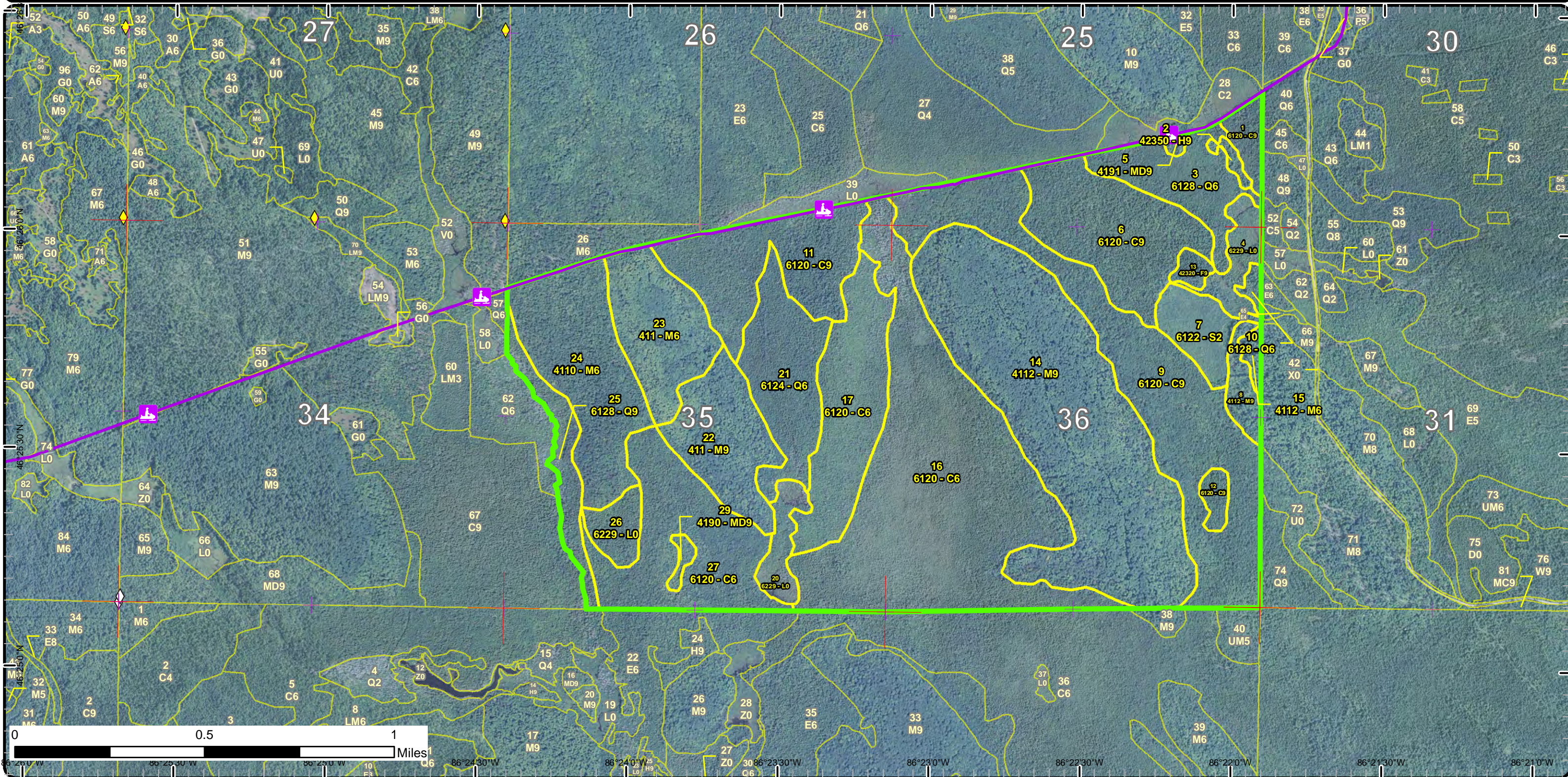


Stand Boundary Map

Compartment: 182
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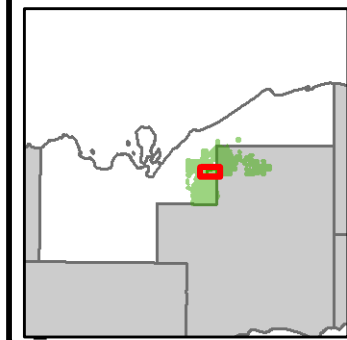


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- ◆ Survey Grade GPS Corners
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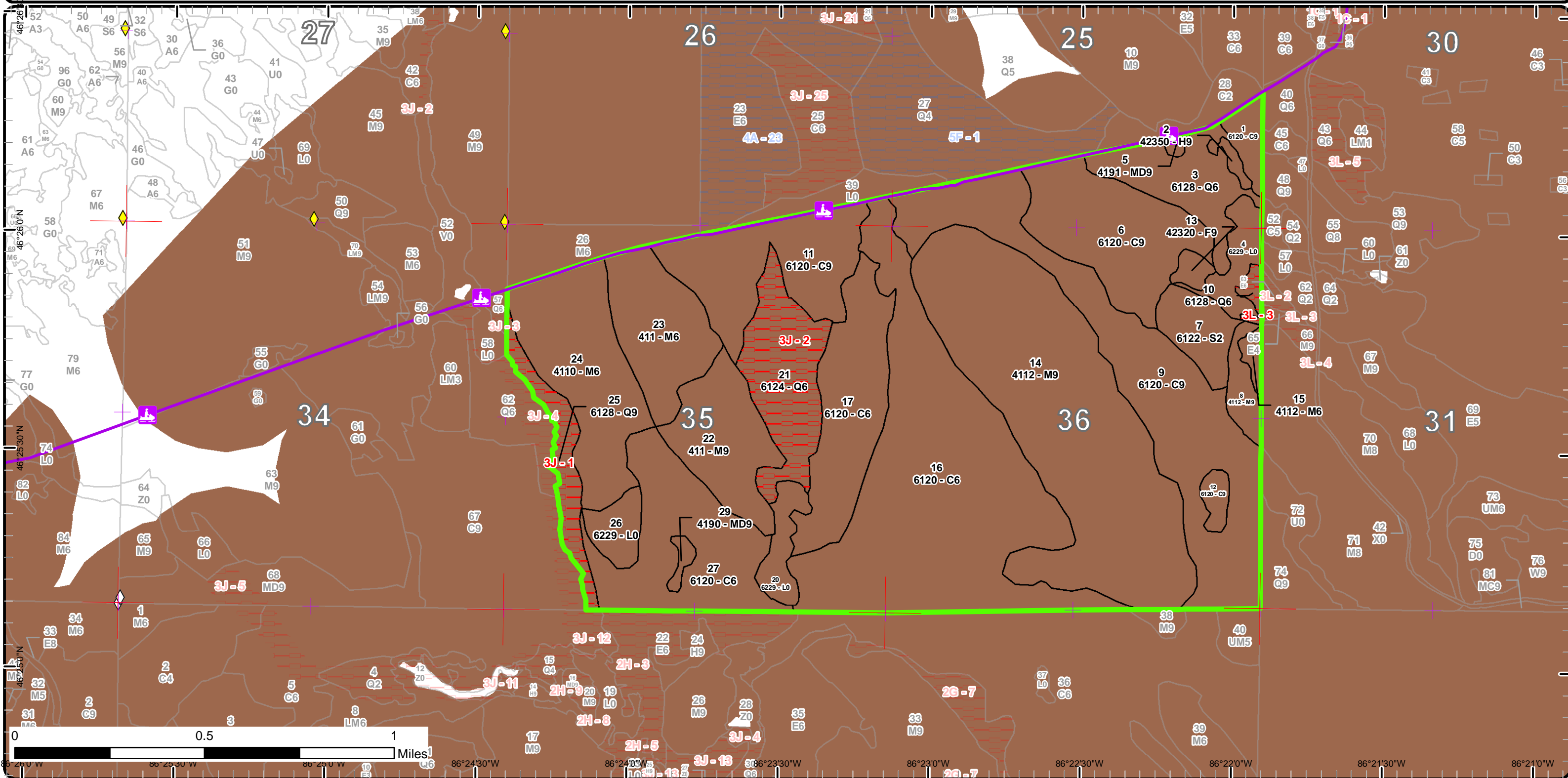


Special Conservation Areas & Site Conditions Map

Compartment: 182
 T47N, R17W, Sec: 25, 35, 36
 County: Alger
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 Mgmt Area: Casino Complex
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- Miris Corners
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- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- 🏠 Snowmobile Trails
- Designated Snowmobile Trails
- ▭ Compartment Boundary
- Unavailable
- 3J: Water quality / BMPs (stream, river, or lake)
- 3L: Other wildlife concerns
- Stand Boundaries
- Deer Winter Range



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	84	72	218	92	227	0	0	0	0	0	0	693
Hemlock	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Lowland Conifers	0	0	0	0	0	0	0	0	44	81	0	0	0	0	0	0	0	0	125
Lowland Shrub	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
Lowland Spruce/Fir	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	5
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	431	431
Upland Spruce/Fir	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5
Total	47	0	22	0	0	0	0	84	118	304	95	227	0	0	0	0	0	434	1331



Report 2 – Treatment Summary

Shingleton Mgt. Unit

Year of Entry: 2018

Acres of Harvest

Compartment 182

Total Compartment Acres: 1,332

Commercial Harvest - 307
 Harvests with Site Condition - 0
 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
Cedar	0	0	76	0	0	0	0	0	0	76
Northern Hardwood	0	227	0	0	0	0	0	0	0	227
Upland Spruce/Fir	5	0	0	0	0	0	0	0	0	5
Total	5	227	76	0	0	0	0	0	0	307

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	307	0	0	0	0	11	14	0	0	332
Next Step	0	0	0	76	0	0	318	0	0	394
Total	307	0	0	76	0	11	332	0	0	726



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
6	41182006-Cut	75.5	6120 - Lowland Cedar	Sawtimber Well	94	141-170	Harvest	Strip/Patch/Gap Cut (Femelschlag)	6120 - Lowland Cedar	Two-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Create a meandering strip throughout the stand about 20 ft wide. To accomplish, mark a "trail" throughout stand and require loggers harvest 10ft on either side of marked path. Make sure a portion of strip links existing road in stand 9 to stand 13.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory); Seeding, Hand Seed

Treatments:

Acceptable Cedar

Regen:

Other Ask Cody about the percentage of stand he wants to be harvested using this method.

Comment:

Proposed Start Date: 10/01/2017

11	41182011-Spray	10.8	6120 - Lowland Cedar	Sawtimber Well	73	141-170	Pesticide	Hand Application	6128 - Lowland Coniferous, Mixed Deciduous	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Spray to control purple loosestrife

Specs:

Next Step Monitoring, Herbicide Use

Treatments:

Acceptable mix of species presently on site

Regen:

Other

Comment:

Proposed Start Date: 10/14/2016

13	41182013-Cut	4.9	42320 - Upland Spruce	Sawtimber Well	88	111-140	Harvest	Clearcut	429 - Mixed Upland Conifers	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clear-cut stand leaving no retention.

Specs:

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Spruce, Balsam Fir, Tamarack, Red Maple, Aspen

Regen:

Other No retention is going to be left because the stand is small in size and the surrounding stands are not being harvested to supply clear cut with adequate seed.

Comment:

Proposed Start Date: 10/01/2017

14	41182014-Cut	226.9	4112 - Maple, Beech, Cherry Association	Sawtimber Well	73	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Follow the 'Complete Marker Guidelines for Northern Hardwoods'. Residual Basel Area should be between 70-90. Mark all live American Beech with Beech Bark Disease.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Northern Hardwood species.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017



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
26	41182026-Monitor	14.0	6229 - Mixed lowland shrub	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Re-Inventory)	6124 - Lowland Spruce-Fir	Uneven-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Check regen during next inventory cycle.

Specs:

Next Step

Treatments:

Acceptable Any mix of species on site.

Regen:

Other Percent to Treat = 100%

Comment:

Proposed Start Date: 10/01/2019

38	41183038-Cut	4.5	4115 - Y.Birch, Hemlock NH	Sawtimber Well	78	51-80	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Follow the 'Complete Marker Guidelines for Northern Hardwoods'. Residual Basel Area should be between 70-90. Mark all live American Beech with

Specs: Beech Bark Disease.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any species growing on site.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

**Total Treatment
Acreage Proposed: 336.6**

Report 4 – Site Conditions

Shingleton Mgt. Unit
Scott Kentner : Examiner

Compartment: 182
Year of Entry: 2018

Availability for Management

Total Acres	Acres Available	Acres Avail With Condition	Acres Not Available	Dominant Site Conditions		
				3J	3L	
694	694	0	0	Cedar		
3	3	0	0	Hemlock		
125	40	0	85	Lowland Conifers	81	4
47	47	0	0	Lowland Shrub		
22	22	0	0	Lowland Spruce/Fir		
5	5	0	0	Mixed Upland Deciduous		
431	431	0	0	Northern Hardwood		
5	5	0	0	Upland Spruce/Fir		
1,332	1,247		85	Total Forested Acres	81	4
	94%		6%	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	Dominant Site 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)	24	Unspecified	Unspecified	Unspecified	Unspecified
Comments:								
2	Unavailable		3J: Water quality / BMPs (stream, river, or lake)	56	Unspecified	Unspecified	Unspecified	Unspecified
Comments:								
3	Unavailable		3L: Other wildlife concerns	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:								

Mgt. Unit

Compartment: #Type!

Year of Entry:



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
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Comments



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	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6120 - Lowland Cedar	Sawtimber Well	10.6	95	141-170	lowland cedar stand with mixed conifer.
2	42350 - Upland Hemlock	Sawtimber Well	3.3	96	111-140	Narrow ridge with large Hemlock & White Pine, surrounded by Cedar on lower ground.
3	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	40.3	74	111-140	Borders the Sunrise Grade snowmobile trail. Low, wet ground.
5	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	1.7	73	111-140	Low quality Red Maple stand, pole to log sized trees.
6	6120 - Lowland Cedar	Sawtimber Well	75.5	94	141-170	The Sunrise Grade snowmobile trail is the north boundary of the stand.
7	6122 - Black Spruce	Sapling Medium	22.3	15	Immature	Cut in 98', Creighton spruce (048-98)
8	4112 - Maple, Beech, Cherry Association	Sawtimber Well	11.6	71	81-110	
9	6120 - Lowland Cedar	Sawtimber Well	148.0	85	111-140	Apx. Half Cedar with a lot of other species. Many of the trees are less than 5" DBH. Partially cut between 1944 & 1950 (Cedar, B. Spruce & B. Fir were removed).
10	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	3.9	77	81-110	
11	6120 - Lowland Cedar	Sawtimber Well	72.4	73	141-170	The Sunrise Grade snowmobile trail is the north boundary of the stand. . There are small creeks and wet areas throughout the stand. Ponding along a drainage in the northeast is resulting in a pocket of dead trees.
12	6120 - Lowland Cedar	Sawtimber Well	6.2	97	171-200	Area of mainly Cedar within larger Q type (stand 9).
13	42320 - Upland Spruce	Sawtimber Well	4.9	88	111-140	Mix of nice quality Spruce and Tamarack. A small creek borders the stand on the south.
14	4112 - Maple, Beech, Cherry Association	Sawtimber Well	226.9	73	111-140	Thinned between 1999 & 2001. Kabuki Hardwoods Large ridge with very nice hardwood (mainly sugar maple) with other species on the lower ground near the edges. Dense sugar maple regen.
15	4112 - Maple, Beech, Cherry Association	Poletimber Well	4.2	60	51-80	Thinned in 2005 with C165. 454 Mix (015-13) 6/21/13 bb, beech salvage with compartment 165 to the east.
16	6120 - Lowland Cedar	Poletimber Well	227.3	102	141-170	Mainly Cedar with a greater variety of species near the hardwood stand #14. Dry Branch of Commencement Creek and other small streams are within the stand; also, some small, wet, bog areas. Scattered small areas of blowdown.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	6120 - Lowland Cedar	Poletimber Well	70.3	87	141-170	There are small creeks and wet areas throughout the stand. Ponding along a drainage in the northeast is resulting in a pocket of dead trees.
21	6124 - Lowland Spruce- Fir	Poletimber Well	56.4	88	111-140	Creek within stand.
22	411 - Northern Hardwood	Sawtimber Well	51.9	86	51-80	[06/07/09] Stand is now under contract TS # 41-030-08-01 Star Creek Hardwood. Residual BA: mixed softwood = 6; hemlock = 5; mixed hardwood = 53; total = 64 sq.ft/acre. 2/27/15: TCR
23	411 - Northern Hardwood	Poletimber Well	53.8	86	81-110	[06/07/09] Stand is now under contract TS # 41-030-08-01 Star Creek Hardwood. Residual BA: sugar maple = 56; y. birch = 3; basswood = 3; mixed softwood = 5; mixed hardwood = 5; total = 72 sq.ft/acre. 2/27/15: TCR
24	4110 - Sugar Maple Association	Poletimber Well	82.6	86	51-80	[06/07/09] Stand is now under contract TS # 41-030-08-01 Star Creek Hardwood. Residual BA: sugar maple = 47; y. birch = 4; basswood = 1; mixed softwood = 5; mixed hardwood = 10; total = 67 sq.ft/acre. TCR: 2/27/15
25	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	24.3	83	111-140	Narrow stand along Star Creek. Some low, wet areas within the stand.
27	6120 - Lowland Cedar	Poletimber Well	83.8	68	111-140	Wet ground with med-tall brush species throughout. Some small openings in the canopy.
29	4190 - Mixed Upland Deciduous with Cedar	Sawtimber Well	3.3	68	111-140	Small patch of red maple/cedar mix in cedar swamp.



Stand	Cover Type	Acres	Managed Site	General Comments:
4	6229 - Mixed lowland shrub	17.4	No	Low, wet area with creeks and ponds. Tag Alder, willow & other tall brush species. A few Cedar & B. Ash. Soil=Carbondale, Lupton, and Tawas soils
20	6229 - Mixed lowland shrub	15.2	No	Low, wet ground with areas of tall brush. There is a creek within the stand. Soil=Carbondale, Lupton, and Tawas soils
26	6229 - Mixed lowland shrub	14.0		[06/07/09] Stand is now under contract TS # 41-030-08-01 Star Creek Hardwood. Residual BA: w.pine = 7; hemlock = 19; total = 26 sq.ft/acre. TCR:2/27/15