



Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72206

Entry Year 2019

Acreage: 1,563

County Crawford

Management Area: Grayling Ice Contact

Revision Date: 2018-03-20

Stand Examiner: Thomas Peterson III

Legal Description:

T27N, R04W, Sections 13, 14, 23, 24, 25, and 36 South Fredric Township

Identified Planning Goals:

To improve forest health, productivity, sustainability, species and structural diversity throughout the State of Michigan by actively managing flora and fauna, while providing for multiple use and visual management. The State ownership in Section 24 & 25 are under a 20-year management agreement with the Michigan National Guard. This agreement allows for camping and maneuvers, but does not allow use of heavy equipment or high intensity live ammunition firing. Tracked vehicles are prohibited on these lands except to cross on designated tank trails. Wheeled vehicles are restricted to existing trails and are not to be driven cross country. Michigan Department of Natural Resources management activities take precedence on these lands, though management activities are often tailored to be compatible with National Guard training needs.

Soil and topography:

The topography is flat in the south with rolling hills in the north. Soils are primarily Grayling sands. These are excessively drained soils. The common trees found on this type of soil are jack pine, northern pin oak, white oak, red pine, white pine, and aspen.

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

Public lands found in Section 36 are owned by the Department of Military and Veteran Affairs. On these lands military training has precedence over resource management activities. The DNR will coordinate all prescribed activities with the National Guard to ensure they are compatible with military training needs. Public lands found in Sections 24 and 25 are under the 1935 long-term lease agreement L-1479 (Act 154 P.A. 1935) with the Michigan National Guard, Department of Military and Veteran Affairs. The Grayling High School is found in the SE1/4 of Section 25.

Unique Natural Features:

There is potential for dry prairie plants in grassy openings: Hill's thistle, rough fescue, Alleghany plum and pale agoseris. There is potential for several animals of concern in this compartment: Kirtland's warbler, prairie warbler, secretive locust, dusted skipper, grizzled skipper, and the red legged spittle bug.

Archeological, Historical, and Cultural Features:

Two 20th Century structural foundations are found within the compartment. Both have been badly disturbed and are common site types.

Special Management Designations or Considerations:

This compartment has heavily traveled roads, encompasses the Grayling High School, and is adjacent to the Crawford County Fair Grounds. Section 36 contains part of the National Guard Airfield. Aesthetics should be considered for all prescriptions.

Watershed and Fisheries Considerations:

None at this time.

Wildlife Habitat Considerations:

There is a diverse range of habitat found within the compartment including grassy openings, wet fens, upland brush, oak stands, aspen stands and mixed pine stands of varying age classes. The large oak stands provide excellent mast sources. The current prescriptions in these oak types will encourage the oak regeneration and help to maintain this cover type, while also providing a browse source and cover for wildlife.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift

thickness varies between 400 and 600 feet. Beneath the glacial drift is the Marshall Sandstone. The Marshall was previously used as a building stone. A gravel pit is in Section 20, and potential is excellent on the upland areas. The compartment is not leased for oil and gas development, but Section 13 to the north is leased.

Vehicle Access:

County Road Old 27 and the several two-track trails which spur off from it provide adequate access to the area. Access is restricted to Airfield property. The Military has a tank trail that runs just south of the section line of Sections 25 and 36 and will cross at the Old 27 and M-93 intersection

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

Snowmobile Trails #7 intersects the entire compartment with Snowmobile Trail# 47 occurring near the East edge of section 25 . A designated ORV Route is along N. Old 27 road shoulders. The planned Iron Belle Trail will also extend as a separate non-motorized corridor near edge of N. Old 27 Road Right of Way. Due to the proximity to Grayling this compartment receives heavy dispersed recreational use occurs throughout the year from hunting game, to mushroom and berry picking.

Fire Protection:

This compartment is in close proximity to resource protection equipment and is easily accessed. The potential for frequent fire events is elevated by the Military use and the railroad. Section 36 poses the highest fire danger risks.

Additional Compartment Information:

The S1/2 of the SE of Section 36 is USA ownership, located within the confines of the national guard airfield.

The following reports from the Inventory are attached:

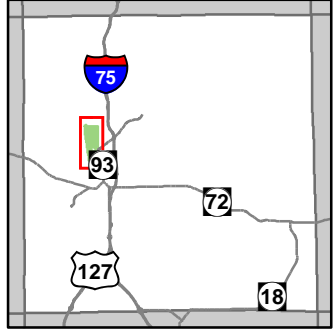
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

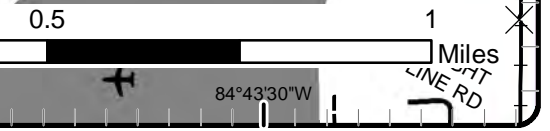
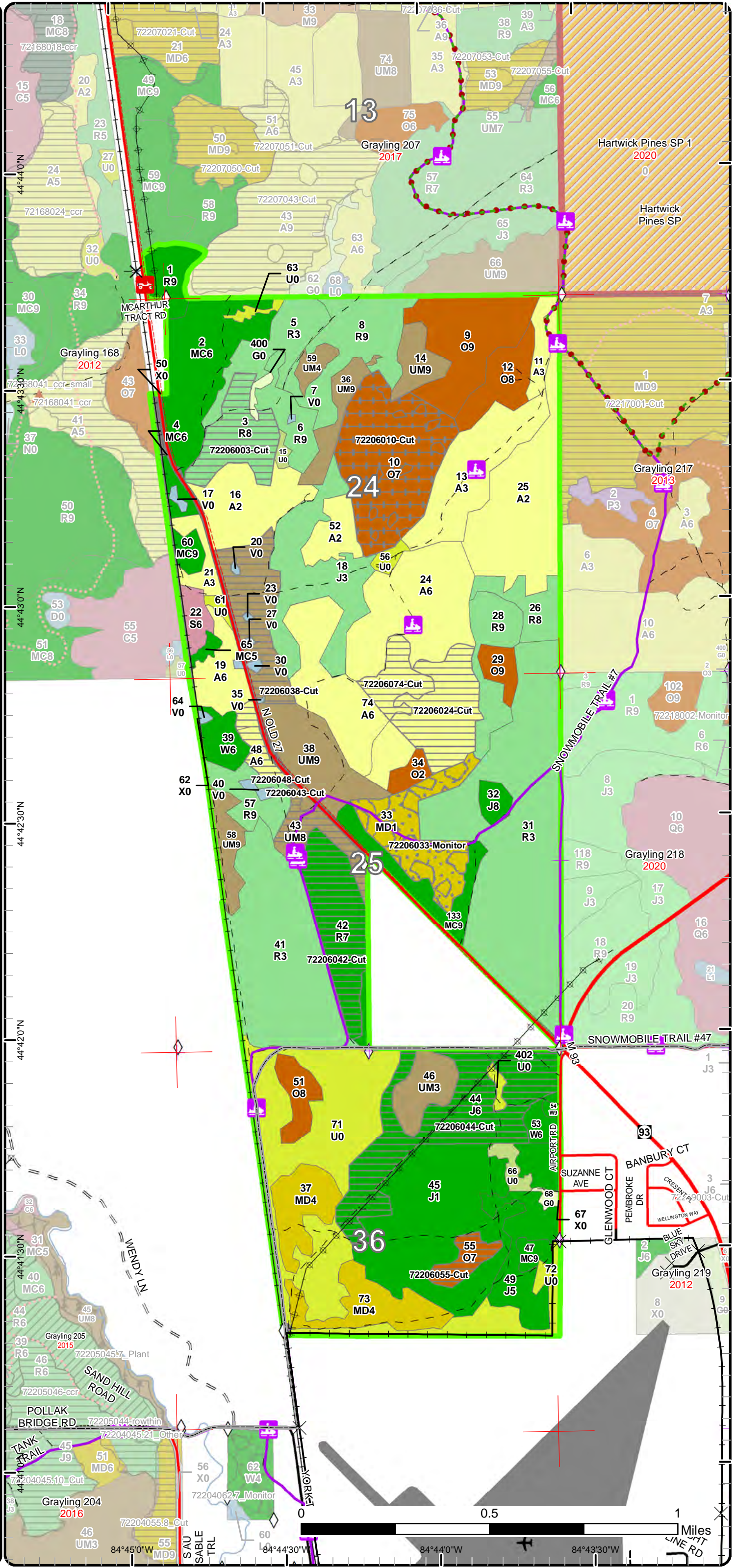
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 206
 T27N,R04W, Sec. 13-14, 23-25, 36
 County: Crawford
 Unit: Grayling
 Mgmt Area: Grayling Ice Contact
 YOE: 2019
 Acres: 1562.5 GIS Calculated
 Examiner: Thomas Peterson III
 Map Revised: 3/13/2018
 Map Phase: Post-Review

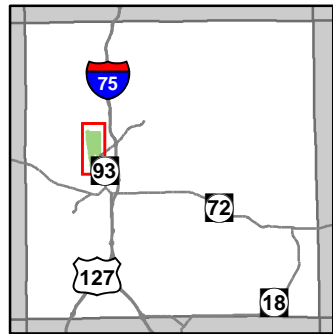


- Miris Corners
- Remonumented Section Corners
- Field Grade GPS Corners
- Counties
- Gate
- Berms
- Airport
- ORV Routes
- Snowmobile Trails
- Designated Hiking Trails
- Designated Equestrian Trails
- Designated ORV Route
- Designated Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
- Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Active Railroads
- Streams
- Powerline
- Fence
- Airports
- Compartment Boundary
- Clearcut (w/Reserves)
- Harvest, Overstory Removal
- Regeneration Survey
- 412 - Oak Types
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 622 - Lowland Shrub
- Camp Grayling Gates
- Camp Grayling Fence
- Camp Grayling Tank Trail

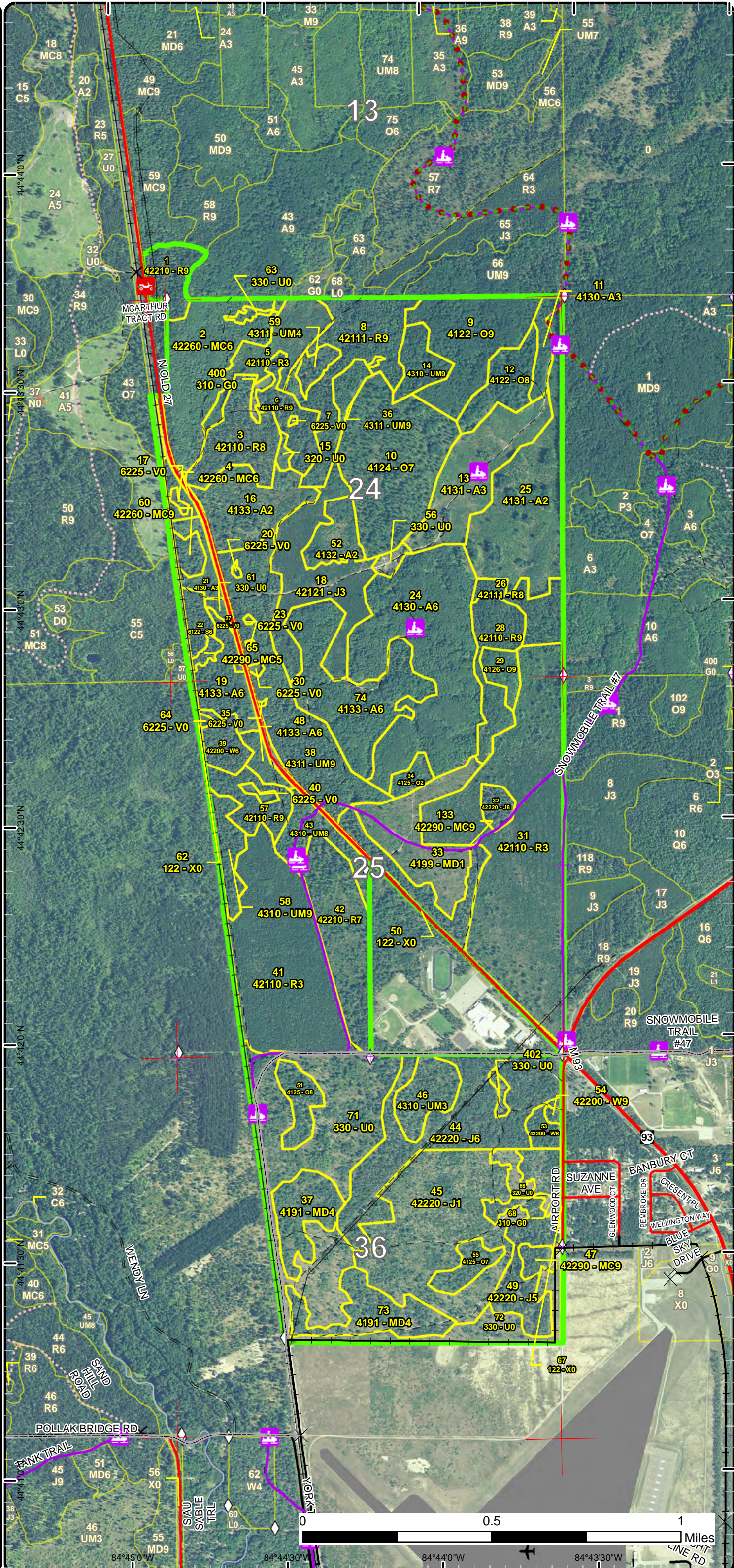


Stand Boundary Map

Compartment: 206
 T27N,R04W, Sec. 13-14, 23-25, 36
 County: Crawford
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 Mgmt Area: Grayling Ice Contact
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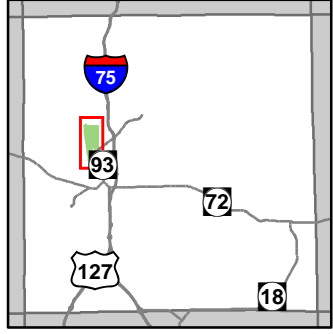


- Miris Corners
- + Remonumented Section Corners
- ◇ Field Grade GPS Corners
- Counties
- ✕ Gate
- ▲ Berms
- ✈ Airport
- ORV Routes
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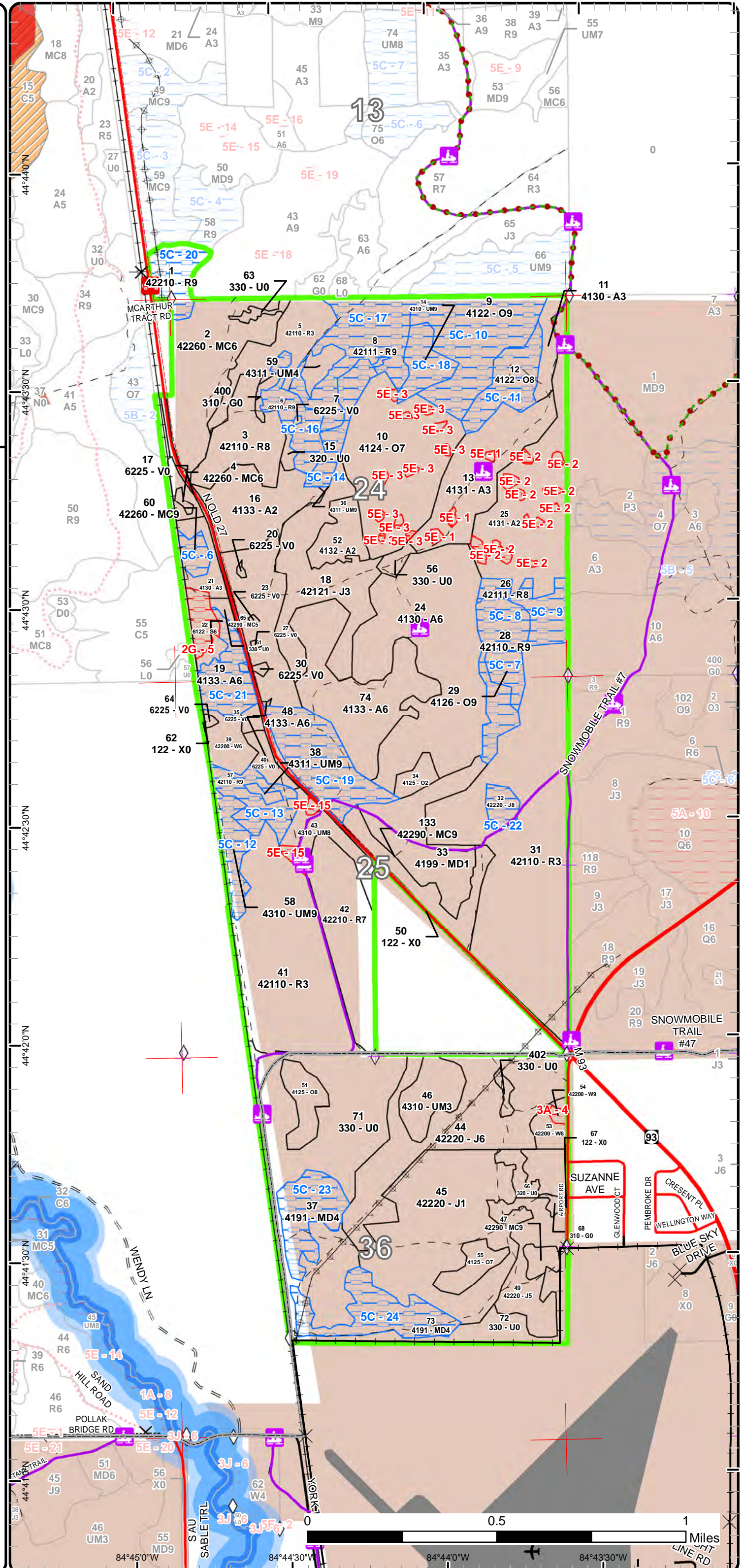


Special Conservation Areas & Site Conditions Map

Compartment: 206
 T27N,R04W, Sec. 13-14, 23-25, 36
 County: Crawford
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 Mgmt Area: Grayling Ice Contact
 YOE: 2019
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- + Remonumented Section Corners
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- ✕ Gate
- ▲ Berms
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- ORV Routes
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- Designated ORV Route
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- Highway
- County Paved Roads
- Paved Roads
- Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Active Railroads
- Streams
- Powerline
- Fence
- Airports
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Conservation Values incompatible with harvest at this time
- 5E: Long-Term Retention
- Stand Boundaries
- Ecological Reference Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Eastern Massasauga Managed Land
- High Priority Trout Stream Buffer
- Research, Development, and Military Lands
- ✕ Camp Grayling Gates
- Camp Grayling Fence
- Camp Grayling Tank Trail



Report 1 – Total Acres by Cover Type and Age Class

Grayling Mgt. Unit

Compartment 206 Year of Entry 2019

Thomas Peterson III : 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	97	49	8	0	142	0	23	0	0	0	0	0	0	0	0	0	0	319
Bog	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Herbaceous Openland	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Jack Pine	0	0	43	0	87	0	24	72	0	0	0	0	0	0	0	0	0	0	226
Low-Density Trees	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6
Mixed Upland Deciduous	0	0	34	0	0	0	0	0	0	43	0	0	0	0	0	0	0	0	77
Natural Mixed Pines	0	0	0	45	0	0	6	0	0	27	0	0	0	0	0	0	0	0	78
Oak	0	0	0	5	0	0	0	0	11	135	0	0	0	0	0	0	0	0	151
Red Pine	0	0	152	80	0	0	0	0	0	160	13	0	0	0	0	0	0	0	405
Upland Mixed Forest	0	15	0	0	0	0	5	0	0	108	0	0	0	0	0	0	0	0	128
Upland Shrub	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Urban	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
White Pine	0	0	0	0	0	0	15	0	0	0	0	0	1	0	0	0	0	0	16
Total	158	112	278	138	87	142	50	95	11	473	13	6	1	0	0	0	0	0	1564



Report 2 – Treatment Summary

Grayling Mgt. Unit

Year of Entry: 2019

Acres of Harvest

Compartment 206

Total Compartment Acres: 1,563

Commercial Harvest - 289
 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
Aspen	53	0	0	0	0	0	0	0	0	53
Jack Pine	67	0	0	0	0	0	0	0	0	67
Oak	8	0	0	0	0	58	0	0	0	67
Red Pine	60	0	0	0	0	0	0	0	0	60
Upland Mixed Forest	42	0	0	0	0	0	0	0	0	42
Total	231	0	0	0	0	58	0	0	0	289

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	289	0	0	0	0	34	0	0	0	323
Next Step	0	120	0	0	60	349	0	0	0	529
Total	289	120	0	0	60	383	0	0	0	852



Stand Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
3 72206003-Cut	24.8	42110 - Planted Red Pine	Sawtimber Medium	83	51-80	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Clearcut with retention. Cut all trees 2 inches or greater in DBH. Leave one retention pocket on edge of the stand to facilitate planting operation
Specs:

Next Step SitePrep, Roller Chopping; SitePrep, Trenching; Pesticide, Skidder/Mechanical; Monitoring, Artificial Regen(1yr); Monitoring, Artificial
Treatments: Regen(3yr)

Acceptable Fully stocked planted red pine stand.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

10 72206010-Cut	58.4	4124 - Red with White Oak	Sawtimber Poor	88	1-50	Harvest	Overstory Removal	4139 - Aspen, Mixed Deciduous	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Remove overstory from stand 10. This well need to be done sooner then later. Consider cutting out of the year of entry. Set up and have cut in
Specs: 2018, before saplings get to big and are hard to work around. Protect retention pockets left from previous sale during harvest operations. Stand will need oak wilt restrictions on it. Cutting during winter months will be the preferred time of year to have stand cut.

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Any mix of Aspen, red maple, that has an oak component. Any sort of pine component will also be acceptable

Regen:

Other There is a lot of wood left scattered throughout this stand. Oak is starting to show signs of dieback. Cutting oak will promote stump sprouts,
Comment: giving stand more of an oak component.

Proposed Start Date: 12/01/2017

24 72206024-Cut	31.6	4130 - Aspen	Poletimber Well	45	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Final harvest with retention following standard retention and biomass guidelines. Include grouse and low stump spec. Chipping is preferred but
Specs: not required. Add snow trail spec.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Naturally regenerated aspen with oak, maple and other associated species of medium to well stocked densities.

Regen:

Other Will have to utilize a small section of snowmobile trail to access the sale.

Comment:

Proposed Start Date: 09/13/2017

33 72206033-Monitor	33.7	4199 - Other Mixed Upland Deciduous	Sapling Poor	10	Immatu re	Monitoring	Natural Regen (Re-Inventory)	4212 - Planted Jack Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Check Regeneration, U-types should have been protected during planting operations.

Specs:

Next Step

Treatments:

Acceptable Plant to Jack Pine.

Regen:

Other Stand is not fully stocked at this time. Jack pine seedlings are present at this time, but are not over the 3 foot mark to consider the stand
Comment: forested. Oak has been heavily browsed with major mortality in the oak. A few aspen clones present in the stand along with cherry brush in remainder of stand.

Proposed Start Date: 10/01/2018



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
38	72206038-Cut	29.6	4311 - Pine, Aspen Mix	Sawtimber Well	82	81-110	Harvest	Clearcut with Retention	4131 - Aspen, Oak	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Clear cut with retention. Clear cut all trees 2 inches or greater at DBH. Focus retention along bogs making visual breaks for traffic on old HWY 27.
Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Fully stoked aspen stand with any component of oak, red maple or pine will be acceptable.
Regen:

Other Only half the stand is being cut to aid with visual impacts along road. The entire stand is ready and can be cut any time if more acres are need.
Comment: Stand should hold for another 10 years.

Proposed Start Date: 01/25/2017

42	72206042-Cut	35.2	42210 - Natural Red Pine	Sawtimber Poor	83	1-50	Harvest	Clearcut with Retention	4221 - Natural Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Cut all trees 2 inches and greater in DBH. This stand has failed its regen check due to heavy deer browse in the understory. Leave retention along east edge of stand near school. Snowmobile trail runs on outside edge of this stand. use snowmobile spec and protect trail. Only one side of the trail will be cut.
Specs:

Next Step SitePrep, Roller Chopping; SitePrep, Trenching; Pesticide, Skidder/Mechanical; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)
Treatments:

Acceptable Fully stocked red pine plantation, with any oak component will be acceptable.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

43	72206043-Cut	12.8	4310 - Pine, Oak Mix	Sawtimber Medium	82	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Clear cut with retention. Cut all tree 2 inches or greater at DBH. Leave retention standard area retention along old Hwy 27. This stand is cutting along one side of snowmobile trail. Use snowmobile trail spec in order to protect trail. If regeneration fails plant red pine along with stand 42.
Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Any mixture of aspen, red maple, white or jack pine, and oak to a moderate or greater stocking level.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

44	72206044-Cut	67.2	42220 - Natural Jack Pine	Poletimber Well	60	111-140	Harvest	Clearcut with Retention	4222 - Natural Jack Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Clear cut with stand area retention. Cut all trees 2 inch or greater in DBH. Limit harvest to snow off conditions to promote scarification and natural regeneration. Focus retention in North east corner of stand for visual impacts of school and Old Highway 27. The Grayling paved bicycle turnpike runs across NE corner of stand which may impact access as unable to cross here - sign and protect trail.
Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Natural Jack PINE with Oak component. If Natural stand fails plant stand to Red Pine
Regen:

Other There was an Eastern massasauga hit in MNFI layer. This area is not in one of the EMR's of the Eastern massasauga. Protect eastern massasauga during timber sale operations.
Comment:

Proposed Start Date: 10/01/2018



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
48	72206048-Cut	7.8	4133 - Aspen, Mixed Pine	Poletimber Well	61	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Clearcut with no retention due to small size of stand. Cut all trees 2 inches or greater at DBH.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Acceptable regen will be fully stocked aspen stand, with any mixture of oak, red maple or pine.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

55	72206055-Cut	8.4	4125 - Black, N. Pin Oak	Sawtimber Poor	85	1-50	Harvest	Clearcut	412 - Oak Types	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Clear cut with no retention. Clear cut all trees 2 inches and greater at DBH. No Retention left do to small size of stand and decline in oak.

Specs: Increase size of harvest increase chance of stand to have an oak component.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen and jack pine with an oak component is desired but will accept any regeneration at a moderate to high stocking level.

Regen:

Other

Comment: There was an Eastern massasauga hit in NFI layer. This area is not in one of the EMR's of the Eastern massasauga. Protect eastern massasauga during timber sale operations.

Proposed Start Date: 10/01/2018

74	72206074-Cut	13.1	4133 - Aspen, Mixed Pine	Poletimber Well	45	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Final harvest with retention following standard retention and biomass guidelines. Include grouse and low stump spec. Chipping is preferred but not required. Add snow trail spec.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Naturally regenerated aspen with oak, maple and other associated species of medium to well stocked densities.

Regen:

Other

Comment: Naturally regenerated aspen with oak, maple and other associated species of medium to well stocked densities. Final harvest with retention following standard retention and biomass guidelines. Include grouse and low stump spec. Chipping is preferred but not required. Add snow trail spec. Will have to utilize a small section of snowmobile trail to access the sale.

Proposed Start Date: 09/13/2017

Total Treatment Acreage Proposed: 322.6

Report 4 – Site Conditions

Grayling Mgt. Unit
Thomas Peterson III : Examiner

Compartment: 206
Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	5C	2G	3A	5E
		With Condition	Not Available					
317	294	15	8	Aspen	15			8
6	6	0	0	Bog				
3	3	0	0	Herbaceous Openland				
226	220	5	0	Jack Pine	5			
116	116	0	0	Low-Density Trees				
6	0	0	6	Lowland Spruce/Fir		6		
77	34	43	0	Mixed Upland Deciduous	43			
77	73	5	0	Natural Mixed Pines	5			
150	83	63	4	Oak	63			4
405	296	110	0	Red Pine	110			
129	63	63	2	Upland Mixed Forest	63			2
6	6	0	0	Upland Shrub				
28	28	0	0	Urban				
16	15	0	1	White Pine			1	
1,562	1,236	305	22	Total Forested Acres	305	6	1	14
	79%	20%	1%	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	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
2	Unavailable	5E: Long-Term Retention	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Grayling Mgt. Unit
Thomas Peterson III : Examiner

Compartment: 206
Year of Entry: 2019

4	Unavailable	3A: Conservation Values incompatible with harvest at this time	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Grayling Mgt. Unit

Compartment: 206

Thomas Peterson III : Examiner

Year of Entry: 2019

9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	40	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Grayling Mgt. Unit
Thomas Peterson III : Examiner

Compartment: 206
Year of Entry: 2019

14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
15	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	34	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
18	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	30	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Grayling Mgt. Unit
 Thomas Peterson III : Examiner

Compartment: 206
 Year of Entry: 2019

20	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
21	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
23	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
24	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	24	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
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	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42210 - Natural Red Pine	Sawtimber Well	13.4	91	81-110	Stand Appears to be very healthy. Could not find any planting records for this red pine. Stand seems to be natural and around 90.
2	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	44.9	26	Immature	Red and white pine are scattered throughout sale along with large oaks. Looks like old pine shelter wood of some sort. Aspen has taken over stand were all the gaps were left between pines.
3	42110 - Planted Red Pine	Sawtimber Medium	24.8	83	51-80	Stand has a low basal area of red pine. Stand is of age to be restarted, and is not fully stocked at this time. Planting Records indicate stand was planted in 1938. Thinned 2011 under timber sale contract #720150901. Stand had some rolling topography in it.
4	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	3.8	58	81-110	This stand has a wet land in the middle of it and has railroad tracks to the west and Old highway 27 to the east. of it.
5	42110 - Planted Red Pine	Sapling Well	21.1	17	Immature	Stand has areas were aspen clones are out competing the red pine. There are also a few open areas located within the stand. Red pine trees are about 4-6 feet tall. Stand final harvested January 2001. Stand planted May 2001 under FTP C720444 to RP.
6	42110 - Planted Red Pine	Sawtimber Well	14.0	83	111-140	This stand is of the age and size of a final harvest. This stand is healthy so it can be held on for another 10 years. Planting Records indicate stand was planted in 1938. There is a good amount of hawthorne in understory. There are a few seasonal wet holes in stand.
8	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	33.9	83	81-110	This stand has a Super Canopy of red pine throughout most of it. The stand appears to be planted for most of it. The stand has some open areas scattered throughout it. Scattered jack pine in the western portions of the stand. There are several aspen clones in the stand. In certain areas they have completely out competed the pine, this is very relevant in the southeast portion of stand. There are also scattered large oaks in the stand. This stand could be final harvested, but it is healthy so it can be held on to for another 10 years.
9	4122 - Oak, Pine	Sawtimber Well	39.8	87	81-110	This stand has a blanket of white pine under the overstory throughout the majority of the stand. Oak has little die back at this time. So we are going to hold onto it for another 10 years. Information from past inventory is that there was a Raptor nest found in southern part of stand. This stand was treated with a diameter limit cut 20 yrs ago (everything over 14").
10	4124 - Red with White Oak	Sawtimber Poor	62.6	88	1-50	Stand has a good amount of regeneration. The regeneration consists of Red Maple, Aspen and there is an oak component in stand. The oak has been heavily browsed. That has caused mortality in majority of oak seedlings. The oak that made it past browse height is in good shape. There is about 20 - 30 BA of Oak left as well as 11 retention islands in the stand. This stand was harvested in 2011 under sale #720150901. Oak in overstory is still in good shape with signs of die back starting to occur.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
11	4130 - Aspen	Sapling Well	7.5	26	Immature	Aspen stand is in the stage between Merchantable and un-merchantable.
12	4122 - Oak, Pine	Sawtimber Medium	16.7	87	1-50	The open areas of this stand have good regen. Areas where the bigger oaks are concentrated from the last cut have little to no regen present. The oak regen has been browsed heavily by deer.
13	4131 - Aspen, Oak	Sapling Well	38.9	7	Immature	Stand was Harvested 2011, under timber sale contract #720150901, a couple small retention islands left in stand. Stand has regenerated to mostly aspen with an oak component. Stand does have open grass areas still. Deer browse is evident on smaller oaks that did not make it past browse line.
14	4310 - Pine, Oak Mix	Sawtimber Well	11.0	81	51-80	This stand has rolling topography. It has a canopy of oak, red pine and white pine. The sub-canopy is made up mostly of white pine. There are very dense pockets of white pine scattered throughout the stand.
16	4133 - Aspen, Mixed Pine	Sapling Medium	29.6	18	1-50	Scatters super canopy oak. Retention islands left in areas of stand. Regen is spotty. Some open areas scattered throughout stand. STAND HARVESTED FALL 2000.
18	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	42.8	17	Immature	Regen is 5 - 8' tall. Cherry brush and oak mixed through stand. Stand planted to JP May 2001 (C72-443).
19	4133 - Aspen, Mixed Pine	Poletimber Well	17.4	61	81-110	Big sawlog pines bordering the RR tracks are the seed sources for the understory. Small sink holes and seasonal wet areas found in stand (less than an acre). These wet areas consist of primarily black spruce. There is a high amount of white pine regeneration scattered throughout the stand. The aspen ranges from sapling to log size trees with a scattered age across the aspen. Cut a portion of stand with stand 48 to start management over the next 20 years along old HWY 27.
21	4130 - Aspen	Sapling Well	7.3	18	Immature	There are several open areas scattered throughout the stand. Areas where there is aspen regen it is very thick.
22	6122 - Black Spruce	Poletimber Well	6.4	101	81-110	Majority of spruce found along edges of stand. Large red and white pine found at edge of stand also. Stand appeared to be some open water, in the center of it. Soil type from last inventory cycle was classified as a leafriver muck.
24	4130 - Aspen	Poletimber Well	92.6	45	81-110	Scattered open areas throughout stand. Aspen is healthy, no die back at this time.
25	4131 - Aspen, Oak	Sapling Medium	57.5	7	Immature	Stand was harvested 2011, under timber sale contract #720150901. There were also several retention islands left throughout the stand. Most areas of stand are fully stocked. Other areas are open grass land / cherry shrub stands. Oak seedlings in this stand have been browsed.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
26	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Medium	13.8	82	81-110	Planting records indicate 3 year old trees were planted in 1939. Stand was thinned 2011 under timber sale contract #720150901.
28	42110 - Planted Red Pine	Sawtimber Well	20.1	82	111-140	There are pockets of very dense oak regeneration. Planting records indicate stand was planted in 1939 and 3 year old red pine trees were used.
29	4126 - White, Black, N. Pin Oak	Sawtimber Well	6.8	83	81-110	Stand is still healthy no current die back present. Hold on and reevaluate stand in 10 years watching for oak decline.
31	42110 - Planted Red Pine	Sapling Well	131.3	16	Immature	Trees are about 7-8 feet tall. Stand has scattered larger oak and red pine, the larger trees are mostly concentrated along old highway 27. Stand planted to red pine May 2001 (C72-433).
32	42220 - Natural Jack Pine	Sawtimber Medium	5.3	66	51-80	Stand has good jack pine seedlings in gaps within stand. 1997: HEAVY GUARD USE FOR CAMPSITE .
33	4199 - Other Mixed Upland Deciduous	Sapling Poor	33.7	10	Immature	Stand Harvested 2010 #726260901 "High School Jack" FTP C72-645 Submitted for planting. Snowmobile trail re-route created in stand 2010 after cutting. 2007: This stand is patchy. Open grass land in some areas. Stand was never replanted to Jack Pine under C72-645. Stand is not fully stocked at this time. Jack pine seedlings are present at this time, but are not over the 3 foot mark to consider the stand forested. Oak has been heavily browsed with major mortality in the oak. A few aspen clones present in the stand along with cherry brush in remainder of stand.
34	4125 - Black, N. Pin Oak	Sapling Medium	5.0	21	Immature	Stand is a little different then stand 74. Missing the higher aspen component and trees are more shrubby poor quality trees.
36	4311 - Pine, Aspen Mix	Sawtimber Well	11.7	83	81-110	This stand has a Super Canopy of red pine throughout most of it. These red pine trees are potential legacy trees. They meet the bark requirements of a legacy tree. This stand was originally delineated with stand 8. Do to its high percent of aspen it became its separate stand. This stand has larger scattered oaks also. This stand is of the size and age to be harvested. This stand should hold on for 10 more years.
37	4191 - Mixed Upland Deciduous with Conifer	Poletimber Poor	19.6	85	1-50	Stand was originally delineated with stand 71. There are big wolfy oaks scattered throughout this stand. There are also a few aspen clones scattered throughout this stand also. Might be able to expand aspen clones with treatment. There are several open areas scattered throughout this stand. Open areas consist of brush such as cherry brush with service berry and hawthorne. This stand is MILITARY BOARD land.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	4311 - Pine, Aspen Mix	Sawtimber Well	59.5	82	81-110	Some huge wolfy oak in stand. Stand is patchy w/ open areas, parts of stand has nice pockets of red pine that appears to be planted. There are planting records for north part of stand stating that it was planted in 1939. Other parts of the stand there are aspen clones. This stand has multiple wet/sink holes throughout the stand. North half of stand is more quaking aspen and south half is more bigtooth. Feel south half will hold better than north half.
39	42200 - Natural White Pine	Poletimber Well	9.4	57	51-80	Stand has a Super Canopy of Red and White Pine throughout stand. The NW Corner of stand the super canopy is well represented.
41	42110 - Planted Red Pine	Sapling Well	80.3	25	Immature	Stand is starting to reach pole size. The trees are a mixture of sapling size and pole size trees with the higher percentage being sapling sized trees. There are some less dense areas of trees scattered throughout the stand mostly in the northern part of stand.
42	42210 - Natural Red Pine	Sawtimber Poor	38.1	83	1-50	Stand was cut under timber Sale # 726260901 Open patches of upland brush scattered through out stand. Stand is bordered by the High school and a snowmobile trail. Stand had very little regeneration success after cut. Oaks in stand are heavily browsed with the majority of the seedlings being killed after repeated browsing. At this time the regeneration of stand is considered failed.
43	4310 - Pine, Oak Mix	Sawtimber Medium	15.2	82	51-80	Stand has a lot of oak decline in it. Stand is in poor condition. The snowmobile trail cuts stand in half. Considering harvesting on one side of snowmobile trail at a time.
44	42220 - Natural Jack Pine	Poletimber Well	67.2	60	111-140	Jack pine is showing decline. School is adjacent to stand. Hartwick pine trail runs in Northeast part of stand and continues parallel along old Highway 27. Stand is Military Board Land.
45	42220 - Natural Jack Pine	Sapling Poor	87.0	31	Immature	Stand went from upland shrub to low stocked jack pine saplings over the past 10. There are some openings scattered throughout the stand. Overall stand is healthy, open grown Jack Pine. There was a fire in the area spring 2006. Stand is Military Board Land.
46	4310 - Pine, Oak Mix	Sapling Well	15.3	8	Immature	Stand has large oak left in after cut. It looked like the harvest was some sort of seed tree cut. These oaks are starting to die off and are not looking very healthy. The oak seedlings that are in this stand have sustained heavy deer browse since the harvest has happened.. Sale was cut under sale #726260901. Stand is Military Board Land.
47	42290 - Natural Mixed Pine	Sawtimber Well	4.1	86	81-110	A variety of age classes represented in red pine trees. Majority of understory is white pine.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
48	4133 - Aspen, Mixed Pine	Poletimber Well	5.4	61	51-80	Stand has a mixture of good quality and poor quality aspen in it ranging in age and size class. Stand is at the age and size of were it can be harvested.
49	42220 - Natural Jack Pine	Poletimber Medium	23.5	52	51-80	Several Jack pine trees that are un-merchantable. Hawthorne and service berry mixed through out. Oak regeneration in stand is heavily browsed.
51	4125 - Black, N. Pin Oak	Sawtimber Medium	10.7	78	51-80	There is an aspen clone in the south part of the stand. The oak is pore quality, but seams to be holding on with minim die back at this point. Some oaks are found in the understory but are heavily browsed.
52	4132 - Aspen, Jack Pine	Sapling Medium	11.8	17	Immature	Some areas of the stand appear to be planted to jack pine, and out competed by aspen. Some open areas with cherry brush within stand. Aspen is encroaching within these areas. These areas should fill in within the next 10 years.
53	42200 - Natural White Pine	Poletimber Well	5.5	50	51-80	Stand has a high percentage of white pine in both pole and sapling sized trees. Stand appears to be seeded in from stand 54.
54	42200 - Natural White Pine	Sawtimber Well	1.0	117	111-140	This stand consist of super canopy red and white pine. : There is a very thick understory of white pine under these huge trees. . Must be seed source for stand 53. Stand is unique to immediate surrounding area. Consider leaving stand as old growth stand.
55	4125 - Black, N. Pin Oak	Sawtimber Poor	8.4	85	1-50	Island of oak and pine that was left from the previous cut.. Stand is open grown wolfy oak that is declining. The understory has a good mixture of oak and jack pine present. Oak seedlings are browsed heavily. Most of the understory is over 10 feet tall at this time. There is an aspen clone on the far west edge of this stand.
57	42110 - Planted Red Pine	Sawtimber Well	14.6	83	111-140	Stand contains a Super Canopy of Older Bigger red pine. Old planting records for area indicated 3 year old red pine trees were planted in 1938. Stand has a wet area in the middle of it. Stand has a good amount of oak saplings in NE corner of stand. Oak saplings are heavily browsed throughout stand. Stand is in good health and should hold for anther 10 years. Stand could be cut this year of entry but will be held on to take care of higher priority stands.
58	4310 - Pine, Oak Mix	Sawtimber Well	10.9	83	111-140	This stand has more of a mixed hardwood component than 57. Red pine appears to be planted. Planting records for this area indicated trees were planted in 1938. These trees were 3 years old when planted. This stand is of age and size to be cut. This stand is in good shape and should hold for the next 10 years.
59	4311 - Pine, Aspen Mix	Poletimber Poor	5.0	51	1-50	This stand is poor quality open grown trees. It should be treated with adjacent stands.
60	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	4.7	86	111-140	This stand has a wetland that is in the middle of it. The wetland is a black spruce/ tag alder swamp. This stand has super canopy red and white pines scattered throughout it.

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Grayling Mgt. Unit

Report 7 – Forested Stands

Compartment: 206
Year of Entry: 2019

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
65	42290 - Natural Mixed Pine	Poletimber Medium	2.1	50	1-50	Stand has poor quality open grown pine in it. Aspen to the south in stand 19. Cut stand 65 with stand 19 to promote aspen clones expanding to stand 65.
73	4191 - Mixed Upland Deciduous with Conifer	Poletimber Poor	23.8	85	1-50	Stand was originally delineated with stand 71. There are big wolffy oaks scattered throughout this stand. There area also a few aspen clones scattered throughout this stand also. Might be able to expand aspen clones with treatment. There are several open areas scattered throughout this stand. Open areas consist of brush such as cherry brush with service berry and hawthorne. This stand is MILITARY BOARD land.
74	4133 - Aspen, Mixed Pine	Poletimber Well	49.1	45	51-80	Stand has several open areas in it. These area are primarily cherry shrub and poor quality oak trees. This stand has several aspen clones in it. Unlike stand 24 there is more of an oak and pine component to this stand.
133	42290 - Natural Mixed Pine	Sawtimber Well	17.8	81	81-110	Stand was left for visual Buffer for stand 33. Stand appears to be healthy considering leaving for anther 10 years, until stand 33 is grown up.



Stand	Cover Type	Acres	Managed Site	General Comments:
7	6225 - Bog	0.3	No	Stand has no trees and appears to be a bog in the middle of stand 6.
15	320 - Upland Shrub	1.7	No	Stand has a few scattered jack pine and some aspen encroaching in it. Stand has a lot of hawthorn in it along with other upland shrubs like poor quality cherry trees.
17	6225 - Bog	1.0	No	Wetland located inside of stand #4. Stand appears to be wetland/ bog. There are a few scattered pine trees that started to seed in within this stand.
20	6225 - Bog	0.4	No	No trees in this lowland/ bog area. Several of these areas located in stand #38.
23	6225 - Bog	0.3	No	No trees in this lowland/ bog area. Several of these areas located in stand #38.
27	6225 - Bog	0.3	No	OPIC - FMD: Small wet hole, looks to be wet most of the year.
30	6225 - Bog	1.0	No	No trees in this lowland/ bog area. Several of these areas located in stand #38.
35	6225 - Bog	0.2	No	No trees in this lowland/ bog area. Several of these areas located in stand #38.
40	6225 - Bog	1.6	No	No trees in the wet land area. Area appears to be a bog in stand #57.
50	122 - Road/Parking Lot	13.2	No	Old Hwy 27.
56	330 - Low-Density Trees	2.9	No	Locals having been using this area as shooting range.
61	330 - Low-Density Trees	1.7	No	Cherry shrubs are scattered across stand. There are scattered pine throughout the stand. Consider cutting with stand 19 (the stand to the south) to expand aspen clone into stand 61.
62	122 - Road/Parking Lot	11.8	No	Railroad tracks
63	330 - Low-Density Trees	2.0	No	Stand has a few scattered red pine in it. It also has a lot of poor quality trees / shrubs in it at this time.
64	6225 - Bog	0.6	No	Stand is a wetland / bog within stand 39. Stand had tag alder in it and no trees located in it.
66	320 - Upland Shrub	4.4	No	Stand has a few sapling jack pine encroaching in it, but is mostly grass with some cherry brush within the stand also.
67	122 - Road/Parking Lot	2.6	No	



Stand	Cover Type	Acres	Managed Site	General Comments:
68	310 - Herbaceous Openland	1.5	No	Stand has a few tree encroaching in it.
71	330 - Low-Density Trees	87.4	No	Stand has a few scattered oaks and jack pines scattered throughout it. Stand also has a few aspen clones scattered throughout it. Stand has a high amount of brush in in ground cover layer. This brush consisting of cherry brush, service berry and hawthorn. Stand is Military Board Land.
72	330 - Low-Density Trees	20.3	No	Stand has a few scattered oak and jack pine mixed in within it. Majority of stand is cherry brush with service berry and hawthorn. Stand is Military Board land north of the Military Airport..
400	310 - Herbaceous Openland	1.7	No	Small opening some of it looked like it could have been old timber sale landing.
402	330 - Low-Density Trees	2.0	No	Grass opening has aspen clone starting to encroach in it. Along with aspen there are a few Jack pine and some poor quality cherry trees within the grass opening. Stand is State Military Board land.