

Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72186 Entry Year 2021 Acreage: 1,936

County Crawford

Management Area: Camp Grayling

Revision Date: 2019-03-08

Stand Examiner: Thomas Barnes

Legal Description:

T26N, R04W, Sections 31, 32, and 33, Grayling Township.

Identified Planning Goals:

This compartment is comprised of Hanson Reserve Lands which contain the following deed restrictions: 1) The lands are to be used as a permanent encampment and maneuvering ground for the military, 2) it is to serve as a game preserve for the breeding and protection of game, and 3) it is to serve as a forest reserve. The management goal is to maintain forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment while meeting the deed restrictions.

Soil and topography:

The soils within this compartment consist of well drained Rubicon, Roselawn, and Grayling sands. Topography within this compartment consists of rolling terrain with some pot holes.

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

The compartment is entirely in the Hanson Game Refuge being solid Military Board land. There is heavy military use throughout the compartment. This compartment contains several ranges: a grenade range in section 33, part of the mortar range #13 in section 32, and an old infantry emplacement area in section 31. This compartment is also surrounded by more Military Board lands.

Unique Natural Features:

Dusted Skipper was documented within the compartment in section 31 in 1986. Compartment was inventoried in winter of 2018/19. There is the potential for pine barrens species and dry prarie plant and animal species to exist within the compartment.

Archeological, Historical, and Cultural Features:

None known at this time.

Special Management Designations or Considerations:

The entire compartment is Hanson Reserve lands. All management considerations and uses of these lands is to meet the deed restrictions which are as follows: The land is to be used as a permanent encampment and maneuvering ground for the military; to serve as a game preserve and a forest reserve.

Watershed and Fisheries Considerations:

The compartment does not contain any water bodies.

Wildlife Habitat Considerations:

To manage and maintain cover types and habitats for non-game and game species throughout the compartment. The Hanson Game Reserve deed restrictions prohibit hunting which as resulted in high deer populations in this immediate area. There is evidence of heavy browse throughout the compartment. Examination of cuts performed in the past year have revealed most oak regeneration has died, it appears the stump sprouts were heavily browsed which probably contributed to the mortality of the regeneration. The heavy deer usage and browsing in this area needs to be considered when making treatment prescriptions.

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 located in Section 33 and will be closed in the near future. None of the compartment is leased for oil and gas, but leases are located one-half mile to the south. The entire compartment is

classified as non-development per Department of Military Affairs.

Vehicle Access:

There are numerous trail roads within the compartment due to military training. Most of these trail roads can be accessed from the county roads of Military road and Beaver Road. The compartment can be access from several trails leading from the Camp Grayling Military Base, these trails are restricted access via gates maintained by the military. If any road closure is to occur within the compartment it needs to be agreed upon by Camp Grayling and any newly created roads due to the treatment of stands within the compartment are to be closed when treatment or treatments are finished.

Survey Needs:

None

Recreational Facilities and Opportunities:

Recreational Facilities and Opportunities: There are no designated recreational trails or facilities within this compartment. Hanson Game Refuge deed restrictions prohibit hunting within this compartment except in the W1/2SW1/4 section 31 and the SE SE of section 33. These parcels of state land were acquired later and are not confined to the deed restrictions. There is no designated trail system within the compartment, but snowmobiler's use some of the two tracks during the winter when the range is inactive. All roads in this compartment are closed to orv usage.

Fire Protection:

Fire protection within this compartment is the responsibility of the Camp Grayling Military Fire Department, the Michigan DNR and Grayling Volunteer Fire Department. There is no nearby water source other than Camp Grayling Military Base for the compartment and access for fire equipment is adequate.

Additional Compartment Information:

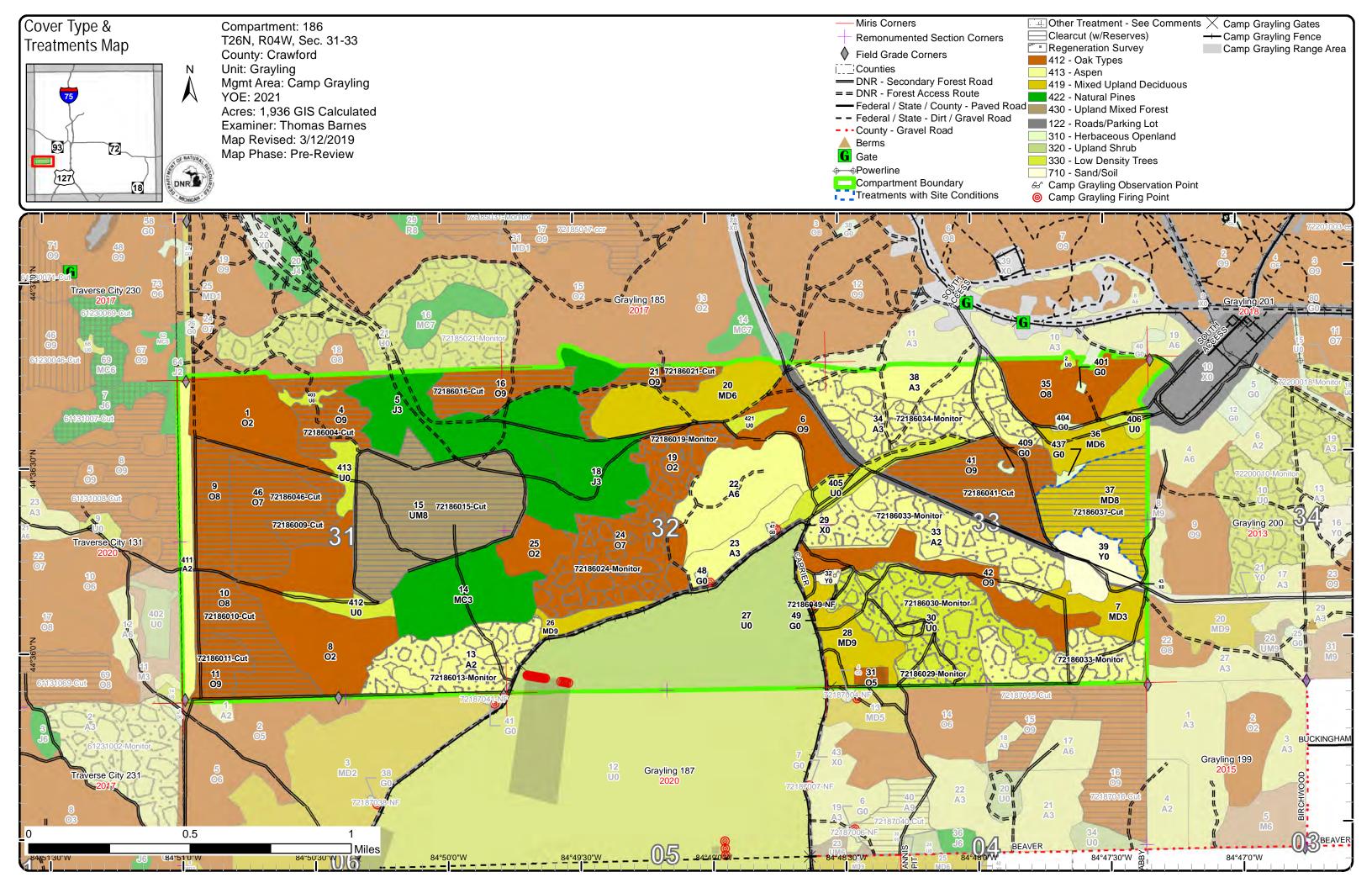
Military burns range 13 off every spring to reduce large fires from occurring during summer training on the range.

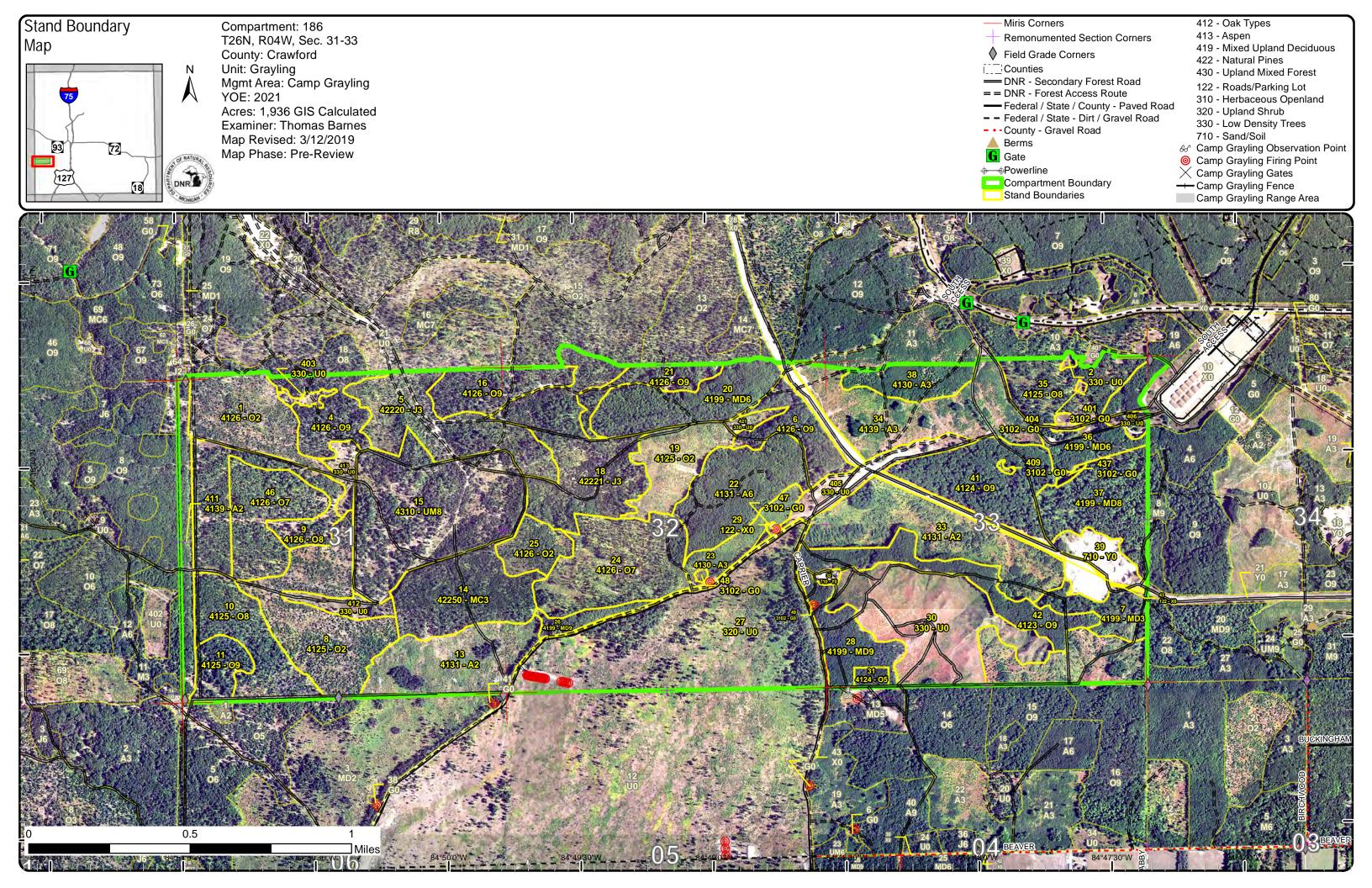
The following reports from the Inventory are attached:

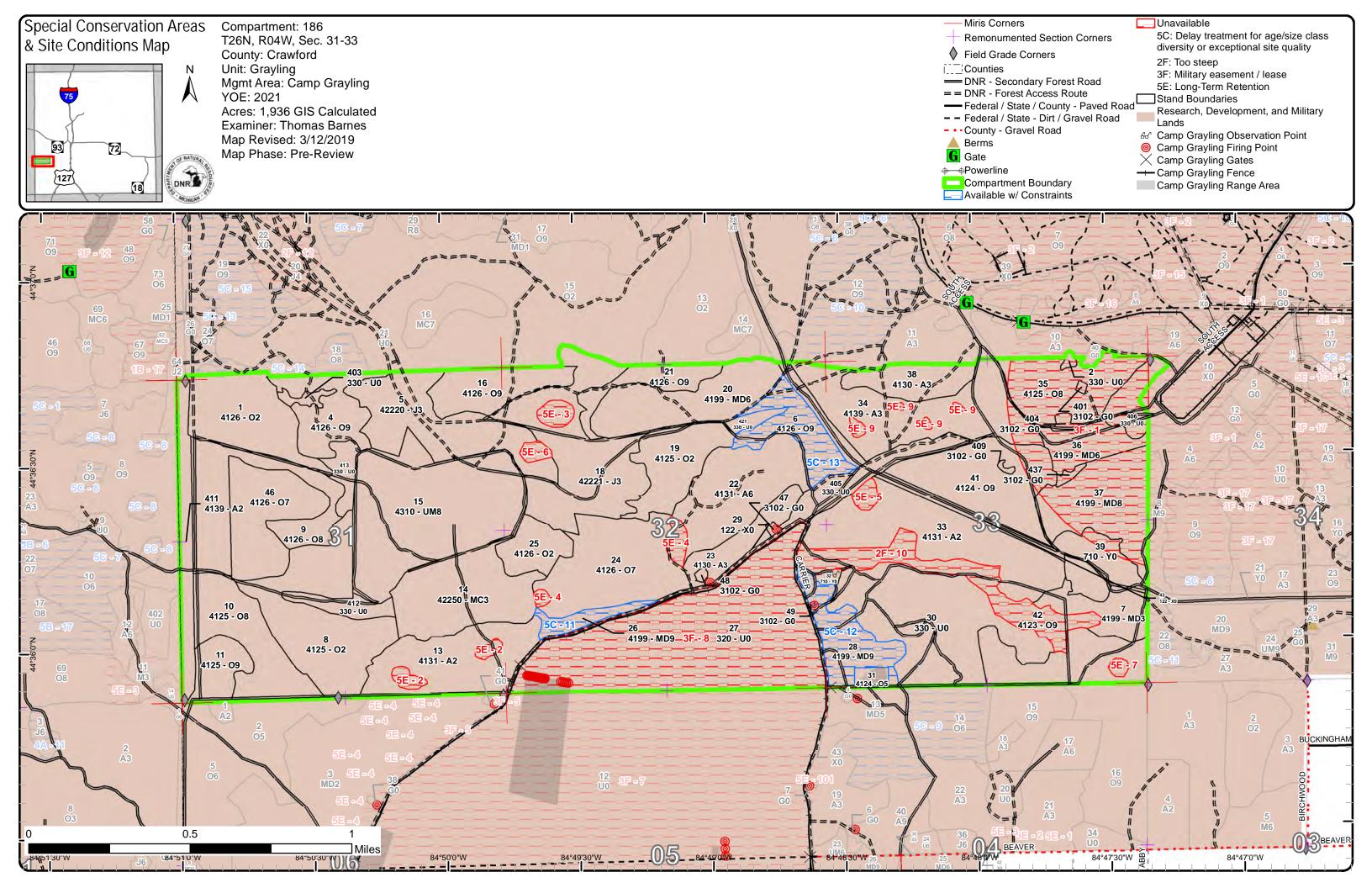
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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







Report 1 – Total Acres by Cover Type and Age Class

Grayling Mgt. Unit

Thomas Barnes: Examiner

Compartment 186 Year of Entry 2021



Age Class

	Hon	A STATE OF THE PROPERTY OF THE		\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\$2.00 5.00	3 / 5	Se Co	g g /%		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	80.00	3 / 6	70,	,	\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	& / P	B. J.	* Jue	No. No.
Aspen	0	275	48	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	379
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	62	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145
Low-Density Trees	146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	146
Mixed Upland Deciduous	0	0	0	0	50	30	40	0	0	0	52	0	0	0	0	0	0	0	172
Natural Mixed Pines	0	0	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
Oak	0	35	146	0	0	0	4	0	0	18	394	0	0	0	0	0	0	0	596
Sand, Soil	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	117	0	0	0	0	0	0	0	117
Upland Shrub	169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169
Urban	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Total	363	310	256	142	50	86	44	0	0	18	563	0	0	0	0	0	0	0	1829



Report 2 – Treatment Summary

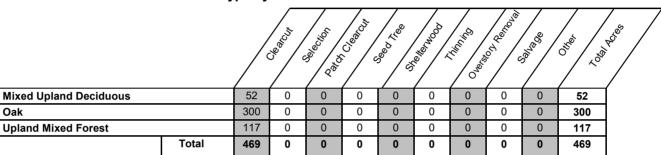
Grayling Mgt. Unit Year of Entry: 2021

Acres of Harvest

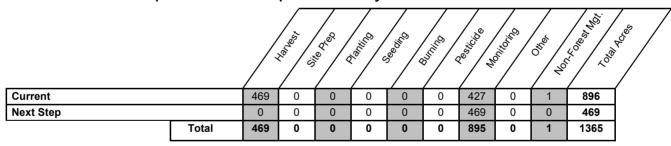
Compartment 186
Total Compartment Acres: 1,936

Commercial Harvest - 417 Harvests with Site Condition - 52 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Monitoring, Natural Regen (Re-Inventory)

Next Step **Treatments:**

Acceptable Oak is the desired species, but any combination of oak (25-35%), maple, aspen, or pine is acceptable. Expect minimal stocking in this stand.

Regen:

Stand is full of foxholes and numerous trenches. Harvest unless military wants to leave. Other

Comment:

Proposed Start Date: 10/1 /2020

51.5 4126 - White, 95 412 - Oak Types Even-Aged 72186009-Cut Sawtimber 51-80 Harvest Clearcut with Proposal -Black, N. Pin Oak Medium Retention Approval Pending Edits

Habitat Cut: No Site Condition:

Prescription Clearcut with retention. Protect oak advanced regen. Follow standard retention guidelines. In addition red pine and white pine are to be left. Add

Specs: military specs and oak wilt specs.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Oak is already established in understory. Aspen and maple are acceptable species as well.

Regen:

Other Comment:

Proposed Start Date: 10/1 /2020

10 72186010-Cut 46.5 4125 - Black, N. Pin Sawtimber 1-50 Harvest Clearcut with 4319 - Mixed Even-Aged Proposal -Oak Medium Retention **Upland Forest** Approval Pending Edits

Habitat Cut: No Site Condition:

Prescription Clear cut with retention. Leave all white oak, red pine, and white pine as retention. Protect existing oak advanced regeneration. Add military

specs and oak wilt specs. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Oak is the desired species, but any combination of oak (25-35%), maple, aspen, or pine is acceptable. Expect minimal stocking in this stand.

Regen:

Other Stand is full of foxholes and numerous trenches. Harvest unless military wants leave.

Comment:

Proposed Start Date: 10/1 /2020

18.3 4125 - Black, N. Pin Sawtimber 87 Clearcut with 4319 - Mixed 72186011-Cut 51-80 Harvest Even-Aged Proposal -Well Retention **Upland Forest** Approval Oak Pending Edits

Habitat Cut: No Site Condition:

Prescription Clear cut with retention. Leave all white oak, red pine, and white pine as retention. Protect existing oak advanced regeneration. Add military

Specs: specs and oak wilt specs.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Acceptable regeneration is an oak component of 25 - 35% with aspen and maple mix.

Regen:

Other Comment:

Specs:

Next Step **Treatments:**

Acceptable Accept a mixture of red maple, aspen and oak regen meeting minimum stocking levels.

Regen:

Other Comment:

Prescription Specs:

Next Step

Treatments:

Acceptable Mix of aspen, red maple, and oak

Regen:

Other Comment:

Percent to Treat = 100%

72186029-NF

10/1 /2018 **Proposed Start Date:**

Habitat Cut: No Site Condition:

0.8

3102 - Grass

brushing, tree and shrub planting and herbicide application.

Nonstocked

Pending Edits

Other - Specify

3102 - Grass

Approval

Proposal -

Next Step

Treatments:

Acceptable

Regen:

Specs:

This maintenance will be carried out through a partnership between the Military, DNR-WLD and the National Wild Turkey Federation.

Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing,

NonForestMgt

Other Comment:

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 186 s Year of Entry: 2021 t а **Treatment** Size Stand BA **Treatment Treatment Cover Type** Acres Stand Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d Natural Regen 30 72186030-60.2 330 - Low-Density 412 - Oak Types Even-Aged Draft Field Nonstocked Monitoring Trees (Re-Inventory) Boundary Monitor Site Condition: **Habitat Cut: No** Prescription Specs: Next Step **Treatments:** Acceptable aspen, red maple, and oak Regen: Other Percent to Treat = 100% Comment: Proposed Start Date: 10/1 /2018 33 72186033-113.1 4131 - Aspen, Oak Natural Regen 411 - Northern Even-Aged Draft Field Sapling **Immatu** Monitoring Medium (Re-Inventory) Hardwood Monitor re Boundary **Habitat Cut: No Site Condition:** Prescription Monitor during inventory. Northern hardwood listed as mo but old comments say regen of aspen, red maple and oak is expected. Stand is regenerating as aspen red maple and oak. Recommend accepting regen as present and change MO to reflect what is coming back. Specs: Next Step Treatments: Acceptable Comments indicate a mix of aspen, red maple and oak is expected. Regen: Other Percent to Treat = 100% Comment: **Proposed Start Date:** 10/1 /2018 72186034-67 7 4139 - Aspen, Sapling Immatu Monitoring Natural Regen 4319 - Mixed Even-Aged Proposal -Monitor Mixed Deciduous Well re (Re-Inventory) **Upland Forest** Approval Pending Edits **Habitat Cut: No Site Condition:** Prescription Monitor during inventory process. Passes Regen Survey for red maple aspen and oak. Specs: Next Step Treatments: Acceptable Red maple and aspen, oak and other associated species meeting minimum stocking levels Regen: Other Comment: 10/1 /2018 Proposed Start Date:

72186037-Cut 51.7 4199 - Other Mixed Sawtimber 51-80 Harvest Clearcut with 4199 - Other Even-Aged Proposal -**Upland Deciduous** Medium Retention Mixed Upland Approval Deciduous Pending Edits

Habitat Cut: No Site Condition: Military Lease/Easement

Prescription Clearcut with retention following standard retention guidelines. In addition leave all white oak and trees greater than 26". Leave all pine as well.

Specs: Military specs and oak wilt specs.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any combination of maple, oak or aspen is acceptable. Variable stocking densities are expected and accepted.

Regen:

Other Military-identified Potential Explosive Safety Arc around the Ammo Supply Point (ASP). Contractors working within this area have to coordinate

activities with the ASP and accept (in writing) the potential risks associated with working in that area. Comment:

Compartment: 186

Year of Entry: 2021

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
41	72186041-Cut	57.7	4124 - Red with White Oak	Sawtimber Well	95	51-80	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	Proposal - Approval Pending Edits

Habitat Cut: No Site Condition:

Prescription Clearcut with retention. Leave all white oak for retention. Oak wilt specs. mil specs. Leave oaks greater than 26".

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any combination of oak, aspen, or maple is acceptable.

Regen:

Military-identified Potential Explosive Safety Arc around the Ammo Supply Point (ASP). Contractors working within this area have to coordinate Other

Comment: activities with the ASP and accept (in writing) the potential risks associated with working in that area.

Proposed Start Date: 10/1 /2020

46 2 4126 - White, 95 72186046-Cut Sawtimber 51-80 Harvest Clearcut with 412 - Oak Types Even-Aged Proposal -Black, N. Pin Oak Retention Approval Poor Pending Edits

Habitat Cut: No Site Condition:

Prescription Clear cut with retention. Leave all white oak, red pine, and white pine as retention. Protect existing oak advanced regeneration. Add military

Specs: specs and oak wilt specs.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Oak is the desired species, but any combination of oak, maple, aspen, or pine is acceptable. Expect minimal stocking in this stand.

Regen:

Other Comment:

Proposed Start Date: 10/1 /2020

72186048-NF 8.0 3102 - Grass Nonstocked NonForestMqt Other - Specify 3102 - Grass Proposal -

Approval Pending Edits

Habitat Cut: No Site Condition:

Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing,

brushing, tree and shrub planting and herbicide application. Specs:

Next Step

Treatments:

<u>Acceptable</u>

Regen:

Other

This maintenance will be carried out through a partnership between the Military, DNR-WLD and the National Wild Turkey Federation.

Comment:

Proposed Start Date: 10/1 /2010

0.2 72186049-NF 3102 - Grass Nonstocked NonForestMgt Other - Specify 3102 - Grass Proposal -

> Approval Pending Edits

Habitat Cut: No Site Condition:

Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing,

brushing, tree and shrub planting and herbicide application. Specs:

Next Step

Treatments:

<u>Acceptable</u> Regen:

Other

This maintenance will be carried out through a partnership between the Military, DNR-WLD and the National Wild Turkey Federation.

Comment:

Proposed Start Date: 10/1 /2010

Total Treatment Acreage Proposed:

897.1

Grayling Mgt. Unit

Thomas Barnes : Examiner

Compartment: 186
Year of Entry: 2021

Availa	ability for	Managemer	nt					
Total	Acres	Acres Avail	Acres		Domina	nt Site	Cond	ditions
Acres	Available	With Condition	Not Available		5C	2F	3F	5E
378	359	0	18	Aspen	0		6	13
7	2	0	4	Herbaceous Openland			4	
145	137	0	8	Jack Pine				8
147	141	0	6	Low-Density Trees			6	
193	77	40	76	Mixed Upland Deciduous	40		76	
59	59	0	0	Natural Mixed Pines				0
668	543	28	96	Oak	28	42	48	6
26	23	0	3	Sand, Soil			3	
117	117	0	0	Upland Mixed Forest				
169	0	0	169	Upland Shrub			169	
28	28	0	0	Urban			0	
1,936	1,487	69	381	Total Forested Acres	69	42	312	27
-	77%	4%	20%	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.

	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
	Unavailable	3F: Military easement / lease	141	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
)	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
3	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
	omments: nis area was left w	hen Stand 18 was harvested,	there is a	ilso many fox holes and fo	ull of old underground enpl	acements and trenches.	

Report 4 – Site Conditions

Grayling Mgt. Unit

Thomas Barnes : Examiner

Compartment: 186 Year of Entry: 2021

4	Unavailable	5E: Long-Term Retention	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: This area was left w	when Stand was harvested, the	e is also	many fox holes and full	of old underground enplace	ments and trenches.	
7	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Unavailable	3F: Military easement / lease	169	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Fenced Range 13						
9	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
10	Unavailable	2F: Too steep	42	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
	Comments:			ith stand 30 (72-638-11-	24)		

Report 4 – Site Conditions

Grayling Mgt. Unit

Compartment: 186 Year of Entry: 2021 **Thomas Barnes: Examiner**

11	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	31	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
13	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	28	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						

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				

Grayling Mgt. Unit Compartment: 186
Year of Entry 2021





* 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.

Conservation Area	Туре	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
	Research and Military Areas	These areas provide facilities and lands specifically dedicated include the 5,847 acre Forest Fire Experiment Station, the 12 Area, the Beaver Islands Archipelago Wildlife Research Area High and Hog Islands, all state owned land on Beaver, South Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Nursery, and over 144,000 acres of Military Lands.	2,000 acre Houghton Lake Wildlife Research a (that includes most of Garden Island, all of a Fox and North Fox Islands), the Cusino

S t	Grayling	Mgt. Unit		Report 7	Forested	Stands Compartment: 186 Year of Entry: 2021
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4126 - White, Black, N. Pin Oak	Sapling Medium	48.6	14	Immature	Sale was cut in winter of 04/05. Cominy back nicely with a significant amount of oak Maple and jack pine also present. This will be a oak stand in the the OPIC - FMD: 2009 Notes: Stand was final harvested in 2005 to military specifications under timber sale 72-045-01-01 Many Fox Hole Block. Stand two was also included within this sale. Management goal is for Oak natural regeneration and will accept the mix of other species such Jack Pine, Red Maple and Aspen. Stand is under long term military lease. Stand is currently an O2 M1. Sedges and Bracken Ferm make up most of the ground cover.
4	4126 - White, Black, N. Pin Oak	Sawtimber Well	31.7	95	81-110	Another oak stand on the decline. Higher component of pole sized Jack pine, with some height. Heavy military activity with foxholes all over and trenches. Stand is full of foxholes and numerous trenches. Harvest unless military wants to leave. OPIC - FMD: OAK IS IN CLUMPS. North side of the hill all fox holes (military type). NO TREATMENT UNLESS MILITARY WANTS IT TREATED
5	42220 - Natural Jack Pine	Sapling Well	62.0	14	Immature	Sale was cut in winter of 04/05. Stand has regenerated well to a jack pine dominated stand. There is a good component of oak and some cherry brush. Also remnant stems of at least 4" and greater of bol oak and jack pine. Stand is at lower end of canopy coverage. OPIC - FMD: Some areas of J6, leave 4 inch and under, leave oak on hill SE part of stand over looking stand 15. Stand final harvested. Sale # 0450101.
6	4126 - White, Black, N. Pin Oak	Sawtimber Well	28.3	94	81-110	Park like oak stand in pretty good shape. Most hybrid oak and white oak with some maple, red and whil pine. Heavy military use as well as deer hunters.
7	4199 - Other Mixed Upland Deciduous	Sapling Well	21.7	15	1-50	Stand is a pretty good mix of species. X-log size oaks scattered through. West side of stand doesnt appear to have been treated and contains oak and a few overmature aspen.Old comments- (The rest of this stand was final harvested, notes indicate this portion was left due to lack of volume in the overstory. An edge call was made when closing adjacent sale. OPIC - FMD: Former treatment ended up with nice oak overstory over a dense understory of aspen and red maple, that are 10-15 feet tall. Aspen starting to be shaded out. Need to remove overstory oak to release patches of aspen and red maple. We have converted this stand away from oak. In areas where we want to maintain some patches of oak, mash the red maple down and clearcut the oak to give oak sprouts opportunity to compete. Is concern over heavy deer browse taking out the oak. Leave patches of oak for visual and mast and retention thorughout the sale area. Will need military permission to treat. Old comments:Cut the aspen and maple, mark some white oak to cut were it's a solid type. Stand was thinned in 2005-2006 under contract 72-049-01-01 Cote Came Thin Block. No FTP was needed following the sale.)
8	4125 - Black, N. Pin Oak	Sapling Medium	79.0	15	Immature	Nine Stand of stump Sproul oak. Red maple, aspen and jack pine is also present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activityis also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-01-01 Leave Valley Oak Block. Cut in spring of 2004

S t	Grayling	Mgt. Unit		Report 7	Forested	Stands Compartment: 186 Year of Entry: 2021
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
9	4126 - White, Black, N. Pin Oak	Sawtimber Medium	51.5	95	51-80	Oak is showing signs of decline. Pretty good oak in the sub- canopy (patchy in places). Some red maple stump sprouts, but not as much as in other stands in compartment. All aspen and maple were removed along with marked oak. North side of stand looks like it was excluded from previous harvest as it contains aspen, jack pine, cherry, and more mature/wolfy oaks.
						Old comments- (OPIC - FMD: Timber sale # 72-026-02-01 (Infantry Encampment). Cut by Chris Muma Forest Products in 2005. Residual after marking the stand was 44 square feet. 06/10/2005 mm 2009: Recommend an underburn to set back Aspen, Red Maple and Cherry. Per 11/10/09 Compt Review, burn stand 46 at the same time.)
10	4125 - Black, N. Pin Oak	Sawtimber Medium	46.5	99	1-50	Stand had all red maple and aspen removed as well as marked oak. Well established understory dominated by maple and aspen of 20 plus feet tall. Oak clumps are present, however, the oak is not nearly as tall. Preetty significant natural mortality of hybrid oak in areas. Scattered red and white pine throughout. Several pits are found in stand from military activity. Stand is full of foxholes and numerous trenches. Harvest unless military wants to leave.
						OPIC - FMD: 2009 Notes: Mature Oak stand with and mix of Oak, Red Maple and some Aspen in the understory. Some of the Oak has died since harvested some area do have a little denser Oak residual than where my plots were taken. Stand is under long-term military lease. Old Notes: LEAVE 50-60 SQ FT OF NICE QUALITY RED AND WHITE OAK. Timber sale #72-026-02-01 (Infantry Encampment). Cut by Chris Muma Forest Products in 2005. Residual after marking the stand was 44 square feet. 06/10/2005 mm
11	4125 - Black, N. Pin Oak	Sawtimber Well	18.3	87	51-80	Poor stand of oak, natural mortality is taking place. Some advanced oak regen is present. OPIC - FMD: 2009 Notes: Stand some what sparse. Stand is Oak patches surrounded by grassy areas. 0402 IN THE SW CORNER.
13	4131 - Aspen, Oak	Sapling Medium	59.6	6	Immature	Mixed young stand of aspen, oak, jack pine, cherry and maple. Oak and maple stump sprouts with oaks ranging any where from 4-15 feet. Jack pine is dense in a few areas. Stand does pass regen survey for a mixture of aspen, oak and jack pine.
						OPIC - FMD: Stand is under long-term military lease and the east side of stand borders the Mortar Range (Range 13-14). Final harvested under contract number 72-624-11-01 "West Range 13 Jack". Two retention islands located in the east and west. Will accept Oak, Aspen and Jack Pine regeneration.
14	42250 - Pine, Oak	Sapling Well	58.5	26	Immature	Young Stand of jack pine with a good presence of oak. Scattered log sized oak stem which some are dying. Fairly high stern density. OPIC - FMD: Immature Jack pine stand with scattered Oak regeneration. Stand also contains 10-20 BA of mature Oak in the overstory. Stand is under long-term military lease.

S t	Grayling	Mgt. Unit		Report 7	Forested	Stands Compartment: 186 Year of Entry: 2021
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
15	4310 - Pine, Oak Mix	Sawtimber Medium	117.1	94	51-80	Mixed oak and Jack Pine stand of poor quality. Oak is suffering heavy mortality, primarily hybrid oak. Jack pine is filling in the open are us fairly well, but resulting in bushy stems. Rolling terrain with heavy military activity. Stand K full of foxholes with Some barb wire and numerous trenches. Leave as is unless military wants treated. OPIC - FMD: HEAVY NATIONAL GUARD USE. CLOSED TO VEHICLE USE DUE TO UNDERGROUND INFANTRY EMPLACEMENTS.
16	4126 - White, Black, N. Pin Oak	Sawtimber Well	29.8	94	51-80	Mature Oak stand mixed with Jack Pine and Red Maple. starting to see fair amount of natural mortality. Similar to stand 21. Stand is under long-term military lease. Stand is also full of old underground emplacements and trenches. Stand is full of foxholes and numerous trenches. Harvest unless military wants to leave.
18	42221 - Natural Jack Pine, Mixed Deciduous	Sapling Well	82.6	26	Immature	Young stand with good stem density dominated by jack pine. Good components of oak, aspen and cherry. Sterns not yet a stick with average heights of 10-15 ft. There a re areas where the stern density is light. OPIC - FMD: Immature Jack Pine stand mixed with Aspen, Oak and cherry brush. 3inch dbh and about 9 feet tall.
19	4125 - Black, N. Pin Oak	Sapling Medium	34.5	6	Immature	Stand was harvested in 2013 with no retention. Stand is regenerating fairly well with a high component of oak with maple, not seeing a whole lot of aspen. Majority of oak B not greater than 4 feet tall; however, I believe the vast majority of what is present will be port of next stand Passing regen survey. OPIC - FMD: Harvested under contract number 72-632-11-01 "Range 13 SHL Final" in May of 2013. No retention. Old comment: Mixture, maple in the valleys along trail, oak on the ridges. Will accept a mixture of red maple, aspen and oak regen.
20	4199 - Other Mixed Upland Deciduous	Poletimber Well	49.7	35	81-110	Young Aspen pole stand mixed with Oak and Red Maple. Long- term military leased.
21	4126 - White, Black, N. Pin Oak	Sawtimber Well	18.2	94	51-80	Mature Oak stand with lots of dead stand Oak. Stand was part of stand 18. A though stand is breaking down it is starting to replace itself with oak, maple and some pine. Very poor quality stand with continued heavy military activity. Stand is full of old underground emplacements and trenches used by the military in the past. Stand is under long-term military lease. Although stand meets silviculture treatment status, unless military requests treatment, this stand will not be treated.
						Old notes: Part of the Oak left after the cutting of stand 18.
22	4131 - Aspen, Oak	Poletimber Well	55.7	45	51-80	Stand was cut in 1974. Good dense stand with mixed aspen along with maple and oak. Oak and maple are smaller in diameter then most aspen. Fair quality stand with rolling terrian. Stand can hold for another 10 years. OPIC - FMD: OI Stand Year Origin was 1974
23	4130 - Aspen	Sapling Well	19.9	6	Immature	Young stand of aspen and maple with good stem densities. There is a small strip of mature trees between road and treated stand. OPIC - FMD: Harvested under contract number 72-632-11-01 "Range 13 SHL Final" in May of 2013. No retention. Stand borders Range 13.

S t	Grayling	g Mgt. Unit		Report 7	- Forested	Stands Compartment: 186 Year of Entry: 2021
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4126 - White, Black, N. Pin Oak	Sawtimber Poor	70.8	95	1-50	Stand was cut in 2013. Some natural mortality of hybrid oak, white oak appears to be doing ok. There is clump maple and oak stump sprouts as well as rootstock regen. Maple regen is averaging about 3-5 feet taller than oak. Recommend no treatment this time to allow oak regen to grow taller. Heavy deer activity as stand is next to range 13.
						OPIC - FMD: Shelterwood under contract number 72-632-11-01 "Range 13 SHL Final" in May of 2013. Lots of pockets of white oak seedlings resulting from thinning last time. Can leave clumps or patches of oak for mast and retention. Stand has residual BA of 30. Will accept a mix of all species of regeneration. BA left heavier along trail bordering Range 13 fence. Old notes: STD THINNED IN 1992 UNDER SALE #60-91-1, REMOVED APPROX 30 BA
25	4126 - White, Black, N. Pin Oak	Sapling Medium	18.3	16	1-50	Scattered jack pine and oak are getting into the pole class but, still immature overall. Open cherry brush and jack pine in south (possibly a small frost pocket). Red maple more of a component in the north. Witch hazel present in low numbers in north side. Jack pine is heavier around the edges of stand. Military "fox hole" dug out and reinforced with plywood next to 2-track one west side.Old comment- (OPIC - FMD: Immature Oak and Jack pine. Used old site index, which was Jack Pine.)
26	4199 - Other Mixed Upland Deciduous	Sawtimber Well	9.1	51	111-140	A few x-log oaks scattered through stand. Most of the red oak looks to be decent quality. Red maple throughout, but heaviest to the west.Old comment- (OPIC - FMD: OI Stand Year Origin was 1968)
28	4199 - Other Mixed Upland Deciduous	Sawtimber Well	31.2	54	111-140	South side of stand butts up against grenade range. Changed age from 62 to 54. West side of stand is aspen dominated and east side is oak dominated.Old comments- (OPIC - FMD: Oak stand mixed with Aspen and Red Maple. Long-term military

4124 - Red with White

Oak

31

Poletimber

Medium

4.0

54

51-80

leased. Military trespass. Military push trees and stumps over into stand to widen trail along range 13 fence.)

Likely have a lot of trees with shrapnel in them. Keep an eye out

for oak wilt in this stand during future inventory. Stand contains various targets, bunkers, and station posts. East side of stand is a little more open than west side. Changed age from 77 to 54.Old comment- (OPIC - FMD: Active gernade range.)

s t	Grayling		Report 7	Forested	Stands Compartment: 186 Year of Entry: 2021	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
33	4131 - Aspen, Oak	Sapling Medium	121.0	5	Immature	Stand has open areas or areas with low stem density. Stand is primarily maple an aspen with mixed oak and other deciduous shrubs.
						Old Comment: Oak Stand was thinned in 2005 and then the overstory was removed in 2014 under contract 72-638-11-01. Pockets of red maple regeneration from the first thinning was protected during the harvest. MO is northern hardwood but all comments indicate expecting a mix of aspen, red maple and oak.
						Old comment: OPIC - FMD: Former treatment ended up with nice oak overstory over a dense understory of aspen and red maple, that are 10-15 feet tall. Aspen starting to be shaded out. Need to remove overstory oak to release patches of aspen and red maple. We have converted this stand away from oak. In areas where we want to maintain some patches of oak, mash the red maple down and clearcut the oak to give oak sprouts opportunity to compete. Is concern over heavy deer browse taking out the oak. Leave patches of oak for visual and mast and retention thorughout the sale area. Will need military permission to treat. Old comments:Cut the aspen and maple, mark some white oak to cut were it's a solid type. Stand was thinned in 2005-2006 under contract 72-049-01-01 Cote Came Thin Block. No FTP was needed following the sale.
34	4139 - Aspen, Mixed Deciduous	Sapling Well	73.8	6	Immature	Young stand dominated by aspen with a fair component of red maple and some oak. Maple and oak are primarily stump sprouts. Rolling to flat terrain with several areas of openness.
						OPIC - FMD: Harvested in spring of 2013 through contract 72-619-11-01, Comp 186 Oak 34. Four retention islands were left. One in unit 1, three in unit 2, and none in unit 3. Monitor regeneration for browse impacts. KKA: 65 acres harvested.
35	4125 - Black, N. Pin Oak	Sawtimber Medium	41.8	99	51-80	Stand was harvested under contract 72-602-11-01, with a residual BA of roughly 70.
						OPIC - FMD: 2009 Notes: Mature Oak stand which has pockets of Aspen within it and scattered Red Maple. Stand is under long-term miliary lease. Recommend thinning stand to 60-70 BA. Remove all Aspen and Red Maple.LOCATED NEAR NATIONAL GUARD AMMO SUPPLY POINT. THIN NEXT TIME.
36	4199 - Other Mixed Upland Deciduous	Poletimber Well	29.7	42	111-140	Stand is starting to get some saw size trees, but still pole size overall.Old comment- (OPIC - FMD: NEAR NATIONAL GUARD AMMO SUPPLY POINT.)

s t	Grayling Mgt. Unit			Report 7	– Forested	Stands Compartment: 186 Year of Entry: 2021
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
37	4199 - Other Mixed Upland Deciduous	Sawtimber Medium	51.7	95	51-80	Long opening along northwest boundary. Heavy browse on maples in stand. Regen gaps full of aspen, red maple, and witch hazel. Sugar maple dominates the east side of the stand, but red oak dominates the rest. Stand will likely convert to red maple/aspen regardless of management.
						Old comments- (Stand was harvested under contract 72-602-11-01, with a residual BA of 70. Stand was harvested in winter of 2013/14. OPIC - FMD: 2009: Even-aged Northern Hardwoods stand. With little to no regeneration in the understory. Stand had a lot of Paper Birch in the past, but is now dying out of the stand. Stand is a mix of some Oak; pockets of Aspen and scattered Basswood and Beech along with the dominate Sugar and Red Maple. Recommend thinning the stand to between 70 and 80 BA and add some regeneration gaps throughout the stand. Stand is under long-term Military lease and is part of the Hanson Refuge. Old Notes: ASPEN CLONES HARVESTED ABOUT30 YEARS AGO. PATCHES OF A3 THROUGHOUT. POSSIBLY THIN IN 10 YEARS.)
38	4130 - Aspen	Sapling Well	22.6	16	Immature	Stand is doing well, with good stem densities. OPIC - FMD: Cut winter 0f 2002/2003 by Chris Muma Forest Products Timber Sale # 72-046-01-01 - Two Stand Training Block. 05/01/2003 mm
41	4124 - Red with White Oak	Sawtimber Well	57.7	95	51-80	Oak overstory with heavy red maple in sub-canopy (a lot in the 10-20' and greater than 20' ranges). White oak present at medium density but, is heavily browsed and less than 5'. Some oak decline and pocket mortality seen through stand. Aspen regen high in pockets, but medium to low overall.
						Old comments- (OPIC - FMD: Cut the aspen and maple, mark some white oak to cut were it's a solid type. Stand was thinned in 2005-2006 under contract 72-049-01-01 Cote Came Thin Block. No FTP was needed following the sale.)
42	4123 - Red Oak	Sawtimber Well	42.1	95	141-170	North facing slope, mostly inoperable. Quality red oak.
						Old comments- (OPIC - FMD: Stand is very hilly. Per silviculturalist, recommend final harvest south slopes only. Leave north slopes alone. Cut and expect a mix of natural regeneration of aspen, red maple, and oak via stump sprouts. Will not get back a full stocking of oak, but plan on a mix. Prescribe entire stand but in reality only a portion of the stand will be harvested. Create a stand 130 as the harvested portionsestimated that as 1/3 of acreage. Remainder of stand will stay as stand 30 and remain unharvested. SJT)
46	4126 - White, Black, N. Pin Oak	Sawtimber Poor	46.2	95	51-80	Patchy oak in sub-canopy low to med densities. Maple sprouts through most of stand. Open park like in areas with little to no sub canopy. Barb wire wrapped around an oak.
						Old comments- (OPIC - FMD: Per 11/10/09 Compt Review, prescribe burn along with stand 9. 2009 Notes: Mature Oak stand with and mix of Oak, Red Maple and some Aspen in the understory. Some of the Oak has died since the harvest. Some areas do have a little denser Oak residual than where my plots were taken. Stand is under long-term military lease. Timber sale #72-026-02-01 (Infantry Encampment). Cut by Chris Muma Forest Products in 2005. Residual after marking the stand was 44 square feet. 06/10/2005 mm)

S t a n d	Grayling Mgt. Unit			Report 7	- Forested	Stands Compartment: 186 Year of Entry: 2021	OF NATURAL PROPERTY OF NAT
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	MICHIGAN
411	4139 - Aspen, Mixed Deciduous	Sapling Medium	25.2	14	Immature	Strip of trees that were harvested along the co regenerating back as aspen, red maple and some are 10-25' tall for aspen and maple and 5-10 OPIC - FMD: Narrow strip of grass and some reg Aspen and Oak along the Crawford/Kalkasl	oak. Stems for oak. eneration of

Compartment: 186 Year of Entry: 2021



Stand	Cover Type	Acres	Managed Site	General Comments:
2	330 - Low-Density Trees	1.1	No	Stump pile some O2.
27	320 - Upland Shrub	169.2	No	Part of the Range 13 Complex, fenced off to any public access old notes still apply. Some areas are forested however majority is upland brush.OPIC - FMD: FENCED NATIONAL GUARD MOTAR RANGE. Upland Brush and Grasses. There are a few pockets of mature Oak in the north end of range. Range is burned on an yearly bases by the National Guard.
29	122 - Road/Parking Lot	9.3	Yes	Range 13 Road, outside of fence with managed shoulder for wildlife and fuel break.
30	330 - Low-Density Trees	91.8		Stand is coming back with primarily red maple. Oak is found scattered and also in fairly dense stems including white and hybrid oak. Other species includes cherry, witch hazel and other deciduous shrubs. Getting close to being a forested stand. Pretty heavy deer browse up along stand 42. There are areas with little to no regeneration. Merged with stand 29. Leave monitoring treatment on stand and re check in 2021. Old MO was Oak for stand 30 and Maple for stand 29, however, exceptable regen list aspen, maple and oak, which is what the stand is leaning towards at this time and appears to be heading towards a Mixed Deciduous stand. Stand harvested in spring 2015 under contract 72-638-11-01. Hasn't sprouted back real well this summer. OPIC - FMD: Stand is very hilly. Per silviculturalist, recommend final harvest south slopes only. Leave north slopes alone. Cut and expect a mix of natural regeneration of aspen, red maple, and oak via stump sprouts. Will not get back a full stocking of oak, but plan on a mix. Prescribe entire stand but in reality only a portion of the stand will be harvested. Create a stand 130 as the harvested portions- estimated that as 1/3 of acreage. Remainder of stand will stay as stand 30 and remain unharvested. SJT
32	710 - Sand, Soil	2.2	No	OPIC - FMD: GRAVEL PITS. Hills in nwsw sec 33.
39	710 - Sand, Soil	24.3	No	Pit is still being used by military.OPIC - FMD: GRAVEL PIT EXPANDED IN 1987. Three Sister's Gravel Pit being used by military. No lease exists for this pit. Is located on Hanson Grant lands.
43	122 - Road/Parking Lot	18.4	No	This is the By-Pass road for camp grayling with managed grass along edges.OPIC - FMD: Corridor was final harvested in 2001 to serve as a military by pass road. Cut over area started to regenerate but military is gradually removing stumps, so most of corridor is sand, shrubs, or grass. Will evenutually be nonstocked travel corridor so called is X0. See contract #018-01-02 Tank Trail Cut.
47	3102 - Grass	0.8	Yes	Wildlife opening, partnership with Camp Grayling.OPIC - FMD: Harvested under contract number 72-632-11-01 "Range 13 SHL Final" in May of 2013. No retention. Stand borders Range 13.
48	3102 - Grass	0.8	Yes	Wildlife opening, partnership with Camp Grayling. Firing Point 13-1 OPIC - FMD: Harvested under contract number 72-632-11-01 "Range 13 SHL Final" in May of 2013. No retention. Stand borders Range 13.

Compartment: 186 Year of Entry: 2021



Cover Type	Acres	Managed Site	General Comments:
3102 - Grass	0.2	Yes	Wilidlife opening, partnership with Camp Grayling.
			OPIC - FMD: Oak stand mixed with Aspen and Red Maple. Long-term military leased. Military trespass. Military push trees and stumps over into stand to widen trail along range 13 fence.
3102 - Grass	0.6	No	Small grassy opening. OPIC - FMD: OI Stand Year Origin was
330 - Low-Density Trees	3.2	No	OPIC - FMD: OI Stand Year Origin was
3102 - Grass	2.2	No	OPIC - FMD: Looks like a Military barrow pit that's been sloped.
330 - Low-Density Trees	22.2	No	Lineal opening with grass and scattered oak trees. Large debris and stump pile along edge by the camp's bypass road. OPIC - FMD: Long narrow flat opening were Military vehicles park.
330 - Low-Density Trees	4.7	No	OPIC - FMD: Near National Guard ammo supply point.
3102 - Grass	0.7	No	Shallow depression
330 - Low-Density Trees	10.4	No	OPIC - FMD: OI Stand Year Origin was
330 - Low-Density Trees	9.2	No	OPIC - FMD: OI Stand Year Origin was
330 - Low-Density Trees	4.2	No	Stump dump in the west half. Filliny in some w/ cherry brush
3102 - Grass	1.6	No	Split grassy opening off of stand 37.
	3102 - Grass 3102 - Grass 330 - Low-Density Trees 330 - Low-Density Trees 3102 - Grass 330 - Low-Density Trees 3102 - Grass 330 - Low-Density Trees	3102 - Grass 0.2 3102 - Grass 0.6 330 - Low-Density Trees 3.2 3102 - Grass 2.2 330 - Low-Density Trees 4.7 3102 - Grass 0.7 330 - Low-Density Trees 10.4 330 - Low-Density Trees 9.2 330 - Low-Density Trees 4.2	Cover Type Acres Site 3102 - Grass 0.2 Yes 3102 - Grass 0.6 No 330 - Low-Density Trees 3.2 No 330 - Grass 2.2 No 330 - Low-Density Trees 4.7 No 3102 - Grass 0.7 No 330 - Low-Density Trees 10.4 No 330 - Low-Density Trees 9.2 No 330 - Low-Density Trees 4.2 No