

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:

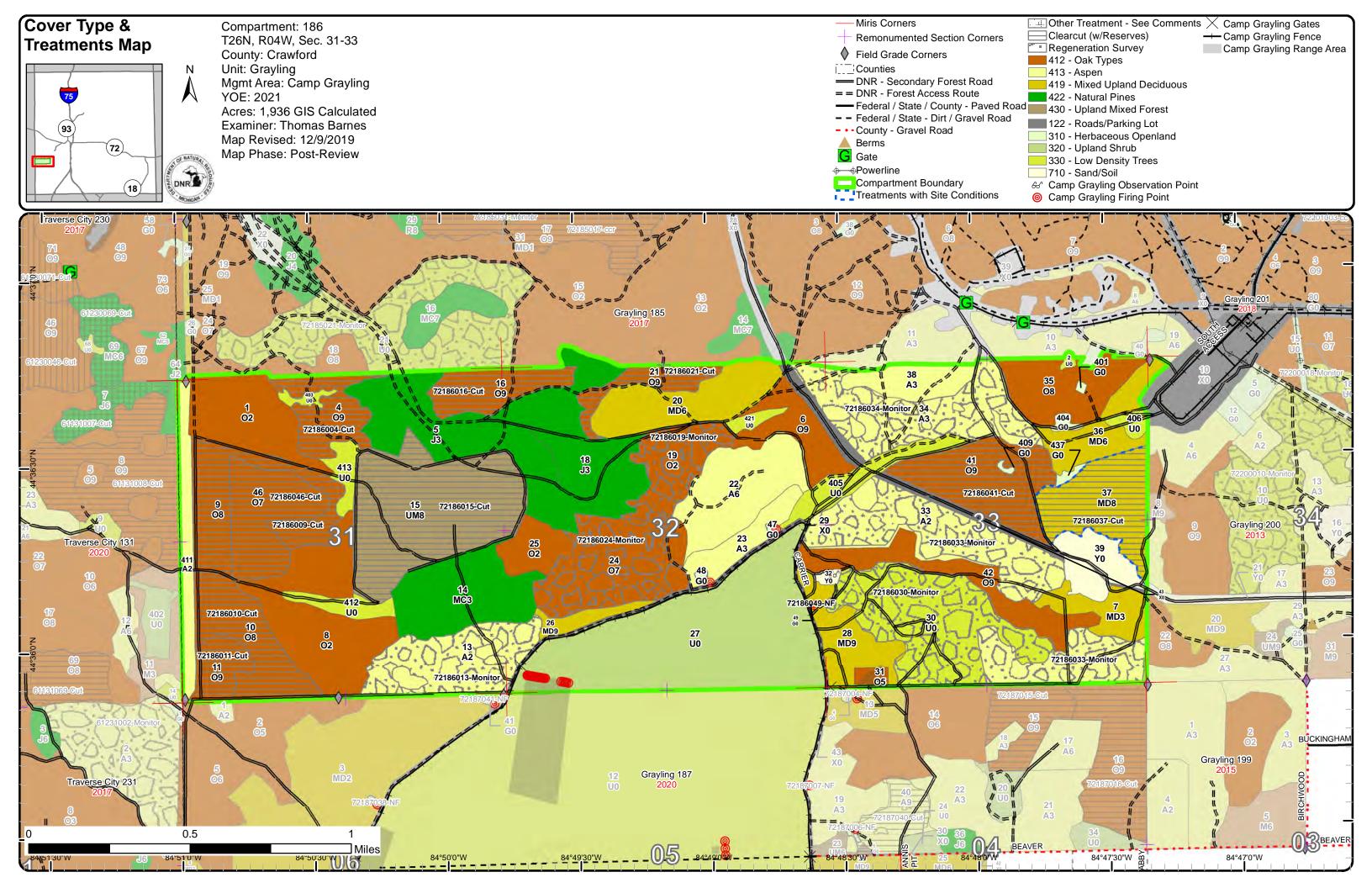
Military burns range 13 off every spring to reduce large fires from occurring during summer training on the range.

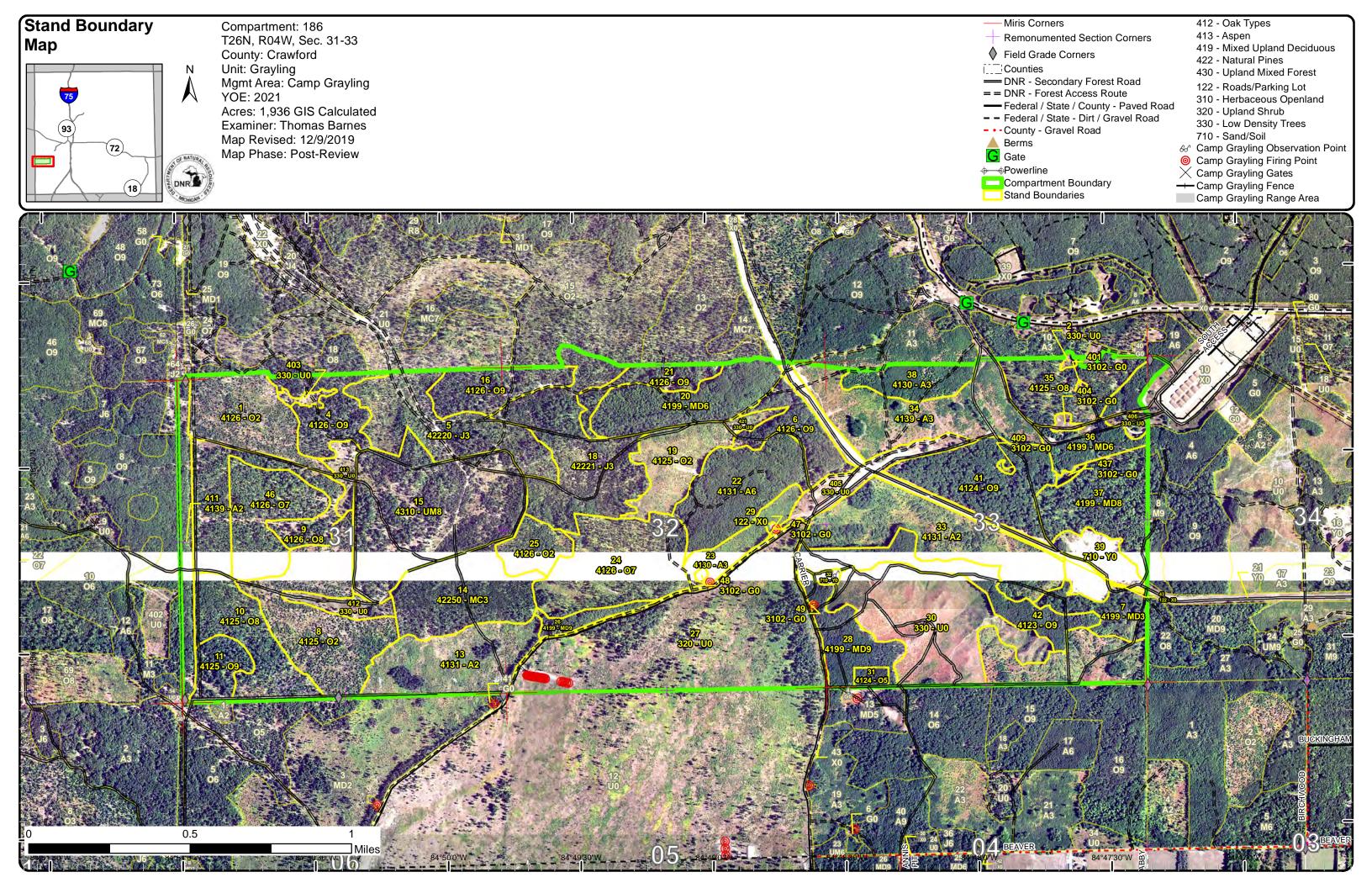
The following reports from the Inventory are attached:

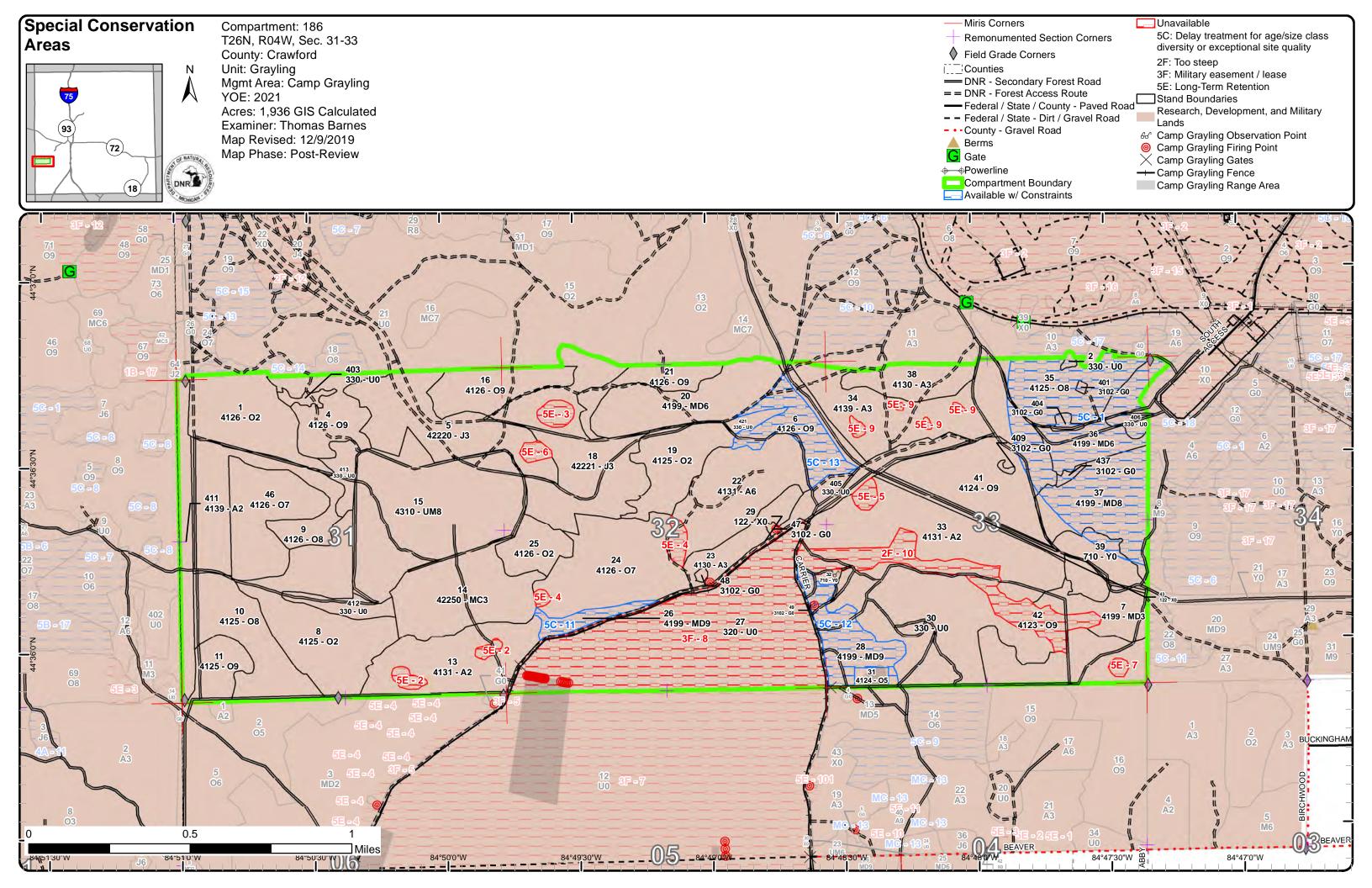
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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







Grayling Mgt. Unit

Thomas Barnes: Examiner

Compartment 186 Year of Entry 2021



Age Class

	₹g.		30 / 2	Ø / &		\$ \$) } 					70,70					St. Ste	No. of Lot
Aspen	0	275	48	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	379
Herbaceous Openland	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Jack Pine	0	0	62	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145
Low-Density Trees	147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147
Mixed Upland Deciduous	0	0	22	0	50	30	40	0	0	0	52	0	0	0	0	0	0	0	194
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	465	0	0	0	0	0	0	0	667
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	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Total	378	310	278	142	50	86	44	0	0	18	634	0	0	0	0	0	0	0	1937



Report 2 – Treatment Summary

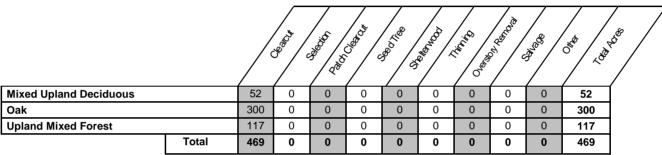
Grayling Mgt. Unit Year of Entry: 2021

Acres of Harvest

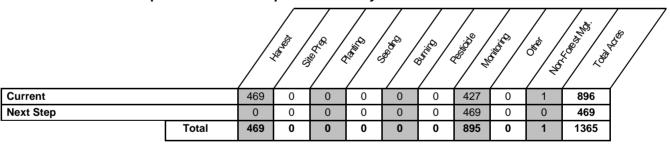
Compartment 186
Total Compartment Acres: 1,936

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



Grayling Mgt. Unit

Compartment: 186 Year of Entry: 2021

Age

Structure



Cut

Treatment Stand Size Stand BA **Treatment Treatment** Cover Type Acres Method Name CoverType Density Age Range Type Objective

Approved Treatments:

72186004-Cut 31.7 4126 - White, Sawtimber 95 81-110 Harvest Clearcut with 4199 - Other Even-Aged No Black, N. Pin Oak Well Retention Mixed Upland

Deciduous

Prescription Clear cut with retention. Leave all white oak as retention. Protect existing oak advanced regeneration. Add military specs and oak wilt specs.

Specs:

S

t а

n

d

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 to leave.

Comment:

Site Condition

Proposed Start Date: 10/1 /2020

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

Medium

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

Specs: Add military specs and oak wilt specs.

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

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

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2020

72186010-Cut 46.5 4125 - Black, N. Pin Sawtimber 99 1-50 Harvest Clearcut with 4199 - Other Even-Aged No Mixed Upland Oak Medium Retention

Deciduous

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 (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 leave. Other

Comment:

Site Condition

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 186 S Year of Entry: 2021 t а **Treatment** Stand Size Stand BA **Treatment Treatment** Cover Type Acres Age Habitat n Method Objective Name CoverType Density Age Range Type Structure Cut d 11 72186011-Cut 18.3 4125 - Black, N. Pin Sawtimber 51-80 Harvest Clearcut with 4199 - Other Even-Aged No Mixed Upland Oak Well Retention Deciduous 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: Site Condition Proposed Start Date: 10/1 /2020 13 72186013-54.6 4131 - Aspen, Oak Sapling Immatu Monitoring Natural Regen 4131 - Aspen, Even-Aged No (Re-Inventory) Oak Monitor Medium re Prescription Monitor during next inventory cycle Specs: Next Step **Treatments:** Acceptable Will accept Oak, Aspen and Jack Pine regeneration. Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2010 117.1 4310 - Pine, Oak 4199 - Other 72186015-Cut Sawtimber 94 51-80 Harvest Clearcut with Even-Aged Nο Mix Medium Retention Mixed Upland Deciduous Prescription Clear cut with retention. Leave all white oak 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 to leave.

Comment:

Site Condition

S		Grayliı	ng Mgt. Unit	ı	Repo	rt 3 1	Freatments		Compartmen		OF NATURAL DINE
a n d	Treatme Name		Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
16	7218601	6-Cut 29.8	4126 - White, Black, N. Pin Oak	Sawtimber Well	94	51-80	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	No
Pres Spe		Clear cut with re	etention. Leave all wh	nite oak as r	etentio	n. Protect	existing oak ad	lvanced regeneratio	n. Add military sp	oecs and oak v	vilt specs.
	t Step Natments:	Nonitoring, Nati	ural Regen (Re-Inver	ntory)							
Acce Reg		ak is the desir	red species, but any o	combination	of oak	(25-35%)), maple, aspen	, or pine is acceptat	ole. Expect minim	nal stocking in	this stand.
Othe Com	<u>er</u> S nment:	Stand is full of f	oxholes and numero	us trenches.	. Harve	est unless	military wants le	eave.			
	Condition										
		t Date: 10/1 /2		0			Marchantan	National Danie	4400 Others	Form Arrest	NI-
19	721860 Monit		4125 - Black, N. Pin Oak	Sapling Medium	6	Immatu re	Monitoring	Natural Regen (Re-Inventory)	4199 - Other Mixed Upland Deciduous	Even-Aged	No
		Monitor during r	next inventory.								
<u>Spe</u>											
Nex	t Step atments:										
Nex Trea	atments: eptable A	accept a mixtur	e of red maple, aspe	n and oak re	egen m	neeting mi	nimum stocking	levels.			
Nex Trea Acce Reg	eptable A	ccept a mixtur	e of red maple, aspe	n and oak re	egen m	neeting mi	nimum stocking	levels.			
Nex Trea Acco Reg Othe Com	atments: eptable A gen: er	occept a mixtur	e of red maple, aspe	n and oak re	egen m	neeting mi	nimum stocking	levels.			

21	72186021-Cut	18.2	4126 - White, Black, N. Pin Oak	Sawtimber Well	94	51-80	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	No

<u>Prescription</u> Clear cut with retention. Leave all white oak and red pine as retention. Protect existing oak advanced regeneration. Add military specs and <u>Specs:</u> oak wilt 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:

Site Condition

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 186 S Year of Entry: 2021 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Habitat n Method Name CoverType Density Age Range Type Objective Structure Cut d 412 - Oak Types Even-Aged 24 72186024-64.9 4126 - White. Sawtimber 1-50 Monitoring Natural Regen No Black, N. Pin Oak Monitor Poor (Re-Inventory) Prescription Monitor during inventory cycle Specs: Next Step Treatments: Acceptable accept a mix of all species of regeneration meeting minimum stocking levels. Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2020 72186030-Natural Regen 4199 - Other 30 91.8 330 - Low-Density Nonstocked 0 Monitoring Even-Aged No Monitor Trees (Re-Inventory) Mixed Upland Deciduous Prescription Monitor Check in 2021 Specs: Next Step **Treatments:** Acceptable aspen, red maple, and oak Regen: <u>Other</u> Percent to Treat = 100% Comment: Site Condition Proposed Start Date: 10/1 /2020 72186033-Natural Regen 4199 - Other No 33 113.1 4131 - Aspen, Oak Sapling 5 Immatu Monitoring Even-Aged Monitor Medium (Re-Inventory) Mixed Upland Deciduous 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:

Site Condition

S t		Graylin	g Mgt. Unit		Repo	rt 3 1	Freatments		Compartmen Year of Entry	/:	DNR DNR
a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
34	72186034- Monitor	67.7	4139 - Aspen, Mixed Deciduous	Sapling Well	6	Immatu re	Monitoring	Natural Regen (Re-Inventory)	4199 - Other Mixed Upland Deciduous	Even-Aged	No
Pre Spe		or during in	ventory process. Pa	asses Rege	en Surv	ey for red	maple aspen ar	nd oak.			
	<u>kt Step</u> atments:										
	<u>eptable</u> Red m gen:	aple and a	spen, oak and othe	r associate	d speci	es meetin	g minimum stoc	cking levels			
Oth Cor	<u>er</u> mment:										
Site	<u>Condition</u>										
Pro	posed Start Date	<u>e:</u> 10/1 /20)18								
37	72186037-Cut	51.7	4199 - Other Mixed Upland Deciduous	Sawtimbe Medium		51-80	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	No
Pre Spe	· · · · · · · · · · · · · · · · · · ·		ention following stan		ion guid	delines. In	addition leave a	all white oak and tre	ees greater than 2	26". Leave all p	ine as
	<u>kt Step</u> Monito atments:	oring, Natur	ral Regen (Re-Inven	tory)							
	<u>eptable</u> Any co gen:	mbination	of maple, oak or as	pen is acce	eptable.	Variable	stocking densition	es are expected an	d accepted.		
Oth Cor			Potential Explosive ies with the ASP an							his area have t	0
Site	Condition Ag	e-Class or	Site Quality								
Pro	posed Start Date	<u>e:</u> 10/1 /20)20								
41	72186041-Cut	57.7	4124 - Red with White Oak	Sawtimbe Well	r 95	51-80	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	No
Pre Spe		ut with rete	ention. Leave all whi	te oak for r	etentio	n. Oak wil	specs. mil spec	cs. Leave oaks gre			

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

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

Regen:

Other Comment: 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.

Site Condition

49 72186049-NF 0.2 3102 - Grass Nonstocked 0 NonForestMgt Other - Specify 3102 - Grass No

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

<u>Specs:</u> brushing, tree and shrub planting and herbicide application.

Next Step

<u>Treatments:</u>

Acceptable Regen:

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

Comment:

Site Condition

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 186 S t Year of Entry: 2021 а Cover Type Objective Age Structure **Treatment** Acres Stand Size Stand BA Treatment Treatment Habitat n CoverType Density Age Method Name Range Type d Cut

Total Treatment Acreage Proposed: 897.1

Compartment: 186

Grayling Mgt. Unit

Thomas Barnes : Examiner Year of Entry: 2021

Availa	bility for	Managemer	nt					
Total	Acres	Acres Avail	Acres		Dominar	nt Site	e Cond	ditions
Acres	Available	With Condition	Not Available		5C	2F	3F	5E
378	359	6	13	Aspen	6			13
7	2	4	0	Herbaceous Openland	4			
145	137	0	8	Jack Pine				8
147	141	6	0	Low-Density Trees	6			
193	78	116	0	Mixed Upland Deciduous	116			
59	59	0	0	Natural Mixed Pines				0
668	543	77	48	Oak	77	42		6
26	23	3	0	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	211	238	Total Forested Acres	211	42	169	27
	77%	11%	12%	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	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	143	Unspecified	Unspecified	Unspecified	Unspecified
_	comments: ee locked commer	nts					
2	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
3	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
_	Comments: This area was left w	hen Stand 18 was harvested,	there is a	also many fox holes and f	ull of old underground enpl	acements and trenches.	
2/0/201	10 3:10:55 PM - Page 1	1 of 2					TONELLO

Report 4 – Site Conditions

Grayling Mgt. Unit

Thomas Barnes : Examiner

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 alsc	many fox holes and full o	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:	slope, Long-term retention asso	ciated w	rith stand 30 (72-638-11-0	01).		

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:

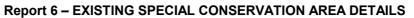


Report 5 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* 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	HCVA = High Conservation Value Area SCA = Special Conservation Area
	search and litary Areas	These areas provide facilities and lands specifically dedicated finclude the 5,847 acre Forest Fire Experiment Station, the 12,0 Area, the Beaver Islands Archipelago Wildlife Research Area (High and Hog Islands, all state owned land on Beaver, South F Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries R Nursery, and over 144,000 acres of Military Lands.	1000 acre Houghton Lake Wildlife Research that includes most of Garden Island, all of Fox and North Fox Islands), the Cusino



Stand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed Site	General Comments
1	4126 - White, E	Black, N. Pi	n Oak	Sapling N	/ledium	48.6	14	Immature	N/A	Sale was cut in winter of 04/05. Cominy back nicely with a significant
	Canopy Species	% Cover	Size Class	DBH	Age					amount of oak Maple and jack pine also present. This will be a oak stand in the the the OPIC - FMD: 2009 Notes: Stand was final harvested in
Blac	k/Red (Hybrid) Oak	50	Sapling	2	14					2005 to military specifications under timber sale 72-045-01-01 Many Fox
	White Oak	20	Sapling	2						Hole Block. Stand two was also included within this sale. Management
	Red Maple	20	Sapling	2						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
	Jack Pine	10	Sapling	2						military lease. Stand is currently an O2 M1. Sedges and Bracken Ferm make up most of the ground cover.
2	330 - Low-l	Density Tre	es	Nonsto	cked	1.1			No	Stump pile some O2.
4	4126 - White, E	Black, N. Pi	n Oak	Sawtimb	er Well	31.7	95	81-110	N/A	Another oak stand on the decline. Higher component of pole sized Jack
	Canopy Species	% Cover	Size Class	DBH	Age					pine, with some height. Heavy military activity with foxholes all over and trenches. Stand is full of foxholes and numerous trenches. Harvest
Blac	k/Red (Hybrid) Oak	47	Log	13	95					unless military wants to leave.
	White Oak	20	Log	12						OPIC - FMD: OAK IS IN CLUMPS. North side of the hill all fox holes
	Jack Pine	23	Pole	7						(military type). NO TREATMENT UNLESS MILITARY WANTS IT
	Red Maple	10	Log/Pole	10						TREATED
5	42220 - Nat	ural Jack P	ine	Sapling	Well	62.0	14	Immature	N/A	Sale was cut in winter of 04/05. Stand has regenerated well to a jack
	Canopy Species	% Cover	Size Class	DBH	Age					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
	Jack Pine	80	Sapling/Pole	3	14					and jack pine. Stand is at lower end of canopy coverage. OPIC -
Blac	k/Red (Hybrid) Oak	17	Sapling/Pole	3						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, E	Black, N. Pi	n Oak	Sawtimb	er Well	28.3	94	81-110	N/A	Park like oak stand in pretty good shape. Most hybrid oak and white oak
	Canopy Species	% Cover	Size Class	DBH	Age					with some maple, red and whil pine. Heavy military use as well as deer hunters.
Blac	k/Red (Hybrid) Oak	60	Log	12	94					namoro.
	White Oak	20	Log	12						
	Red Maple	15	Pole/Log	8						



	Level 4 Co	over Type	;	Size De	nsity	Acres	Stand Age B	A Range	Managed S	ite	General Comments
7	4199 - Other Mixed	d Upland D	eciduous	Sapling	y Well	21.7	15	1-50	N/A		Stand is a pretty good mix of species. X-log size oaks scattered through.
(Canopy Species	% Cover	Size Class	DBH	l Age						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
	Red Oak	15	Log/XLog	16							was final harvested, notes indicate this portion was left due to lack of
	Black Cherry	10	Sapling	2							volume in the overstory. An edge call was made when closing adjacent
	Red Maple	20	Sapling	2							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
	Beech	10	Sapling	1							Aspen starting to be shaded out. Need to remove overstory oak to
	Paper Birch	10	Sapling	2							release patches of aspen and red maple. We have converted this stand
Е	Bigtooth Aspen	35	Sapling	3	15						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
											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.)
R	4125 - Black	k, N. Pin O	ak S	apling N	Medium	79.0	15 l	mmature	N/A		Nice Stand of stump Sprout oak. Red maple, aspen and jack pine is als
8	4125 - Black Canopy Species	k, N. Pin O		Sapling N				mmature Density	N/A Avg. Height	Size	present. Scrub cherry is also scattered about. Stand at higher end of
	4125 - Black Canopy Species <td></td> <td></td> <td>DBH</td> <td>Medium Age 15</td> <td>Sub-Car</td> <td>15 In an an</td> <td></td> <td></td> <td>Size Sapling</td> <td></td>			DBH	Medium Age 15	Sub-Car	15 In an			Size Sapling	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height		present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present.
Black	Canopy Species <td>% Cover</td> <td>Size Class Sapling/Pole</td> <td>DBH</td> <td>l Age</td> <td>Sub-Car</td> <td>nopy Species</td> <td>Density</td> <td>Avg. Height</td> <td></td> <td>present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-0</td>	% Cover	Size Class Sapling/Pole	DB H	l Age	Sub-Car	nopy Species	Density	Avg. Height		present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-0
Black	Canopy Species «/Red (Hybrid) Oak Red Maple	% Cover 60 20	Size Class Sapling/Pole Sapling	DBH 3	l Age	Sub-Car	nopy Species	Density	Avg. Height		present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present.
Black	Canopy Species k/Red (Hybrid) Oak Red Maple Quaking Aspen Jack Pine 4126 - White, B	% Cover 60 20 10 10 10	Size Class Sapling/Pole Sapling Sapling Sapling Sapling	DBH 3 3 1 2 wtimber	15 15 Mediu	Sub-Car Chok m 51.5	nopy Species se Cherry	Density Medium 51-80	Avg. Height 5 - 10 feet N/A	Sapling	present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-0 01 Leave Valley Oak Block. Cut in spring of 2004 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
Black	Canopy Species x/Red (Hybrid) Oak Red Maple Quaking Aspen Jack Pine 4126 - White, B Canopy Species	% Cover 60 20 10 10 slack, N. Pi % Cover	Size Class Sapling/Pole Sapling Sapling Sapling Sapling n Oak Sa Size Class	DBH 3 3 1 2 wtimber	15 15 Mediu	Sub-Car Chok m 51.5 Sub-Car	nopy Species see Cherry 95 nopy Species	Density Medium 51-80 Density	Avg. Height 5 - 10 feet N/A Avg. Height	Sapling	present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-0 01 Leave Valley Oak Block. Cut in spring of 2004 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 other stands in compartment. All aspen and maple were removed along
Black 9 Black	Canopy Species K/Red (Hybrid) Oak Red Maple Quaking Aspen Jack Pine 4126 - White, B Canopy Species K/Red (Hybrid) Oak	% Cover 60 20 10 10 Slack, N. Pi % Cover 59	Size Class Sapling/Pole Sapling Sapling Sapling n Oak Size Class Log	3 3 1 2	15 15 Mediu	Sub-Car Chok m 51.5 Sub-Car Black/Rec	95 hopy Species d (Hybrid) Oak	Density Medium 51-80 Density Low	Avg. Height 5 - 10 feet N/A Avg. Height Variable	Sapling Size Sapling	present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-0 01 Leave Valley Oak Block. Cut in spring of 2004 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 other stands in compartment. All aspen and maple were removed along with marked oak. North side of stand looks like it was excluded from
Black 9 Black	Canopy Species K/Red (Hybrid) Oak Red Maple Quaking Aspen Jack Pine 4126 - White, B Canopy Species K/Red (Hybrid) Oak Bigtooth Aspen	% Cover 60 20 10 10 Slack, N. Pi % Cover 59 8	Size Class Sapling/Pole Sapling Sapling Sapling n Oak Sa Size Class Log Pole	DBH	15 15 Mediu	Sub-Car Chol m 51.5 Sub-Car Black/Rec	95 nopy Species d (Hybrid) Oak	Density Medium 51-80 Density Low Medium	Avg. Height 5 - 10 feet N/A Avg. Height Variable Variable	Size Sapling Sapling Sapling	present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-0 01 Leave Valley Oak Block. Cut in spring of 2004 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 other stands in compartment. All aspen and maple were removed along
Black 9 Black	Canopy Species k/Red (Hybrid) Oak Red Maple Quaking Aspen Jack Pine 4126 - White, B Canopy Species k/Red (Hybrid) Oak Bigtooth Aspen White Oak	% Cover 60 20 10 10 Slack, N. Pi % Cover 59 8 20	Size Class Sapling/Pole Sapling Sapling Sapling n Oak Sa Size Class Log Pole Log	DBH 3 3 1 2 wtimber DBH 12 7 11	15 15 Mediu	Sub-Car Chok m 51.5 Sub-Car Black/Rec Wh	95 nopy Species d (Hybrid) Oak dite Oak d Maple	Density Medium 51-80 Density Low Medium Low	Avg. Height 5 - 10 feet N/A Avg. Height Variable Variable 10 - 20 feet	Size Sapling Sapling Sapling Sapling	present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-0 01 Leave Valley Oak Block. Cut in spring of 2004 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 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.
Black 9 Black	Canopy Species K/Red (Hybrid) Oak Red Maple Quaking Aspen Jack Pine 4126 - White, B Canopy Species K/Red (Hybrid) Oak Bigtooth Aspen	% Cover 60 20 10 10 Slack, N. Pi % Cover 59 8	Size Class Sapling/Pole Sapling Sapling Sapling n Oak Sa Size Class Log Pole	DBH	15 15 Mediu	Sub-Car Chok m 51.5 Sub-Car Black/Rec Wh Rec	95 nopy Species d (Hybrid) Oak dite Oak d Maple ed Pine	Density Medium 51-80 Density Low Medium Low Trace	N/A Avg. Height Variable Variable Variable Variable Variable	Size Sapling Sapling Sapling Sapling Sapling	opersent. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-07 01 Leave Valley Oak Block. Cut in spring of 2004 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
Black 9 Black	Canopy Species k/Red (Hybrid) Oak Red Maple Quaking Aspen Jack Pine 4126 - White, B Canopy Species k/Red (Hybrid) Oak Bigtooth Aspen White Oak	% Cover 60 20 10 10 Slack, N. Pi % Cover 59 8 20	Size Class Sapling/Pole Sapling Sapling Sapling n Oak Sa Size Class Log Pole Log	DBH 3 3 1 2 wtimber DBH 12 7 11	15 15 Mediu	Sub-Car Chok m 51.5 Sub-Car Black/Rec Wh Rec Rec Bigtor	95 nopy Species d (Hybrid) Oak dite Oak d Maple ed Pine oth Aspen	Density Medium 51-80 Density Low Medium Low Trace Trace	N/A Avg. Height Variable Variable Variable Variable Variable 10 - 20 feet Variable	Size Sapling Sapling Sapling Sapling Sapling Sapling Sapling	Canopy coverage. High wildlife activity is also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-0401 Leave Valley Oak Block. Cut in spring of 2004 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 it 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
Black 9 Black	Canopy Species k/Red (Hybrid) Oak Red Maple Quaking Aspen Jack Pine 4126 - White, B Canopy Species k/Red (Hybrid) Oak Bigtooth Aspen White Oak	% Cover 60 20 10 10 Slack, N. Pi % Cover 59 8 20	Size Class Sapling/Pole Sapling Sapling Sapling n Oak Sa Size Class Log Pole Log	DBH	15 15 Mediu	Sub-Car Chok m 51.5 Sub-Car Black/Rec Wh Rec Rec Bigtor	95 nopy Species d (Hybrid) Oak dite Oak d Maple ed Pine	Density Medium 51-80 Density Low Medium Low Trace	N/A Avg. Height Variable Variable Variable Variable Variable	Size Sapling Sapling Sapling Sapling Sapling	present. Scrub cherry is also scattered about. Stand at higher end of canopy coverage. High wildlife activity is also present. OPIC - FMD: Final harvest. Leave the dead oak. Timber Sale 72-043-0 01 Leave Valley Oak Block. Cut in spring of 2004 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 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



Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age E	BA Range	Managed S	Site	General Comments	
10	4125 - Blad	ck, N. Pin O			Medium	46.5	99	1-50	N/A		Stand had all red maple and aspen removed as well as marked oak. Well established understory dominated by maple and aspen of 20 plus	
	Canopy Species		Size Class		Age	Sub-Can	opy Species	Density	Avg. Height	Size	feet tall. Oak clumps are present, however, the oak is not nearly as tall.	
Bla	ck/Red (Hybrid) Oak	80	Log	12	99	Quaki	ng Aspen	High	>20 feet	Sapling	Preetty significant natural mortality of hybrid oak in areas. Scattered red	
	White Oak	15	Log/Pole	12		Red	d Maple	High	>20 feet	Sapling	and white pine throughout. Several pits are found in stand from military activity. Stand is full of foxholes and numerous trenches. Harvest unless	
						Oal	k (spp.)	Low	5 - 10 feet	Sapling	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 - Blad	ck, N. Pin O	ak S	Sawtimb	er Well	18.3	87	51-80	N/A		Poor stand of oak, natural mortality is taking place. Some advanced oak regen is present. OPIC - FMD: 2009 Notes: Stand some what	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	opy Species	Density	Avg. Height	Size	sparse. Stand is Oak patches surrounded by grassy areas, 0402 IN T	
Bla	ck/Red (Hybrid) Oak	80	Log/Pole	12	87	Oal	k (spp.)	Medium	5 - 10 feet	Sapling		
	White Oak	10	Log/Pole	10								
13		Aspen, Oak		Sapling N		59.6	6	Immature	N/A		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	
	Canopy Species	% Cover			Age						pine is dense in a few areas. Stand does pass regen survey for a	
DI-	Quaking Aspen	40	Sapling	1	6						mixture of aspen, oak and jack pine.	
ыа	ck/Red (Hybrid) Oak		Sapling	1	6						OPIC - FMD: Stand is under long-term military lease and the east side of	
	Choke Cherry Jack Pine	7	Sapling	1							stand borders the Mortar Range (Range 13-14). Final harvested under	
	Jack Fille	1	Sapling	ı							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	N/A		Young Stand of jack pine with a good presence of oak. Scattered log	
	Canopy Species	% Cover	Size Class	DBH	Age						sized oak stem which some are dying Fairly high stern density. OPIC - FMD: Immature Jack pine stand with scattered Oak	
	Jack Pine	65	Sapling/Pole	4	26						regeneration. Stand also contains 10-20 BA of mature Oak in the	
Bla	ck/Red (Hybrid) Oak	30	Sapling/Pole	3							overstory. Stand is under long-term military lease.	
15	4310 - Pi	ne, Oak Mix	x Sa	wtimber	Medium	117.1	94	51-80	N/A		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	
	Canopy Species	% Cover	Size Class	DBH	Age						well, but resulting in bushy stems. Rolling terrain with heavy military	
Bla	ck/Red (Hybrid) Oak	43	Log	13	94						activity. Stand K full of foxholes with Some barb wire and numerous	
	Jack Pine	42	Pole	5	37						trenches. Leave as is unless military wants treated. OPIC - FMD: HEAVY NATIONAL GUARD USE. CLOSED TO VEHICLE USE DUE TO	
	White Oak	10	Log	12							UNDERGROUND INFANTRY EMPLACEMENTS.	



Stand	d Level 4 Co	over Type	:	Size De	nsity	Acres	Stand Age I	BA Range	Managed S	ite	General Comments	
16	4126 - White, B	slack, N. P	in Oak S	Sawtimb	er Well	29.8	94	51-80	N/A		Mature Oak stand mixed with Jack Pine and Red Maple. starting to see	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	term military lease. Stand is also full of old underground emplacements	
Blac	ck/Red (Hybrid) Oak	60	Log	12	94	J	ack Pine	Low	< 5 feet	Sapling	and trenches. Stand is full of foxholes and numerous trenches. Harvest	
	White Oak	20	Log	12		0	ak (spp.)	Low	5 - 10 feet	Sapling	unless military wants to leave.	
	Red Maple	20	Log/Pole	10				·			-	
18	42221 - Natural Deci	Jack Pine, duous	Mixed	Sapling	y Well	82.6	26	Immature	N/A		Young stand with good stem density dominated by jack pine. Good components of oak, aspen and cherry. Sterns not yet a stick with	
	Canopy Species	% Cover	Size Class	DBH	l Age						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	
	Jack Pine	65	Sapling/Pole	4	26						and cherry brush. 3inch dbh and about 9 feet tall.	
Bla	ck/Red (Hybrid) Oak	20	Sapling/Pole/Lo	og 4								
19	4125 - Blac	k, N. Pin C	ak S	Sapling I	/ledium	34.5	6	Immature	N/A		Stand was harvested in 2013 with no retention. Stand is regenerating	
	Canopy Species	% Cover	Size Class	DBH	l Age						fairly well with a high component of oak with maple, not seeing a whole	
Blad	ck/Red (Hybrid) Oak	50	Sapling	1	6						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	
	White Oak	15	Sapling	1							Passing regen survey. OPIC - FMD: Harvested under contract	
	Red Maple	30	Sapling	1							number 72-632-11-01 "Range 13 SHL Final" in May of 2013. No	
	rtod Mapie	00	Capining								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			Poletimb		49.7	35	81-110	N/A		Young Aspen pole stand mixed with Oak and Red Maple. Long-term military leased.	
	Canopy Species	% Cover	Size Class		l Age						mintary leased.	
	Quaking Aspen	34	Pole/Sapling		35							
	Red Maple	33	Pole/Sapling									
Blac	ck/Red (Hybrid) Oak	33	Sapling/Pole	4								
21	4126 - White, B	Black, N. P	in Oak S	ak Sawtimber Well		18.2	94	51-80	N/A		Mature Oak stand with lots of dead stand Oak. Stand was part of stand	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	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	
Blac	ck/Red (Hybrid) Oak	70	Log	12	94	Black/Re	ed (Hybrid) Oak	Medium	Variable	Sapling	military activity. Stand is full of old underground emplacements and	
	White Oak	20	Log	12		W	hite Oak	Low	Variable	Sapling	trenches used by the military in the past. Stand is under long-term	
											military lease. Although stand meets silviculture treatment status, unles military requests treatment, this stand will not be treated.	
											Old notes: Part of the Oak left after the cutting of stand 18.	
22	4131 - A	spen, Oak	F	Poletimb		55.7	45	51-80	N/A		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	
	Canopy Species	% Cover	Size Class	DBH	l Age						aspen. Fair quality stand with rolling terrian. Stand can hold for another	
	Bigtooth Aspen	30	Pole/Log	8	45						10 years. OPIC - FMD: OI Stand Year Origin was 1974	
	Quaking Aspen	30	Pole	6	45							
Bla	ck/Red (Hybrid) Oak	20	Pole/Sapling									
	Red Maple	20	Pole/Sapling	5								



Canopy Species % Cover Size Class DBH Age Quaking Aspen 60 Sapling 1 6 Red Maple 35 Sapling 1 6 Red Maple 35 Sapling 1 6 Canopy Species % Cover Size Class DBH Age Black/Red (Hybrid) Oak 80 Log 12 95 White Oak 20 Log 12 Black/Red (Hybrid) Oak Red Maple Medium Variable Sapling Strip of mature trees betwee FMD: Harvested under contract Final" in May of 2013. No retent Sub-Canopy Species Density Avg. Height Size White Oak Red Maple Sapling Red Maple Medium Variable Sapling Red Maple Medium Variable Sapling Red Maple Medium Variable Sapling Strip of mature trees betwee FMD: Harvested under contract Final" in May of 2013. Some no appears to be doing ok. There is well as rootstock regen. Maple of the National Red Maple Sapling Red Maple Medium Variable Sapling Red Maple Medium Variable Sapling Strip of mature trees betwee FMD: Harvested under Contract Final" in May of 2013. Some no appears to be doing ok. There is well as rootstock regen. Maple of the National Red Maple Sapling Red Maple White Oak Sapling Medium Variable Sapling Red Maple Nedium Variable Sapling Red Maple Nedium Variable Sapling Red Maple Nedium Variable Sapling Strip of mature trees betwee FMD: Harvested under Final" in May of 2013. Some no appears to be doing ok. There is well as rootstock regen. Maple of the National Red Maple Sapling Red Maple Variable Sapling Red Maple Variable Sapling Red Maple National Red Ma	e with good stem densities. There is a gen road and treated stand. OPIC -
Canopy Species % Cover Size Class DBH Age Black/Red (Hybrid) Oak 80 Log 12 95 White Oak 20 Log 12 Black/Red (Hybrid) Oak Low < 5 feet Sapling Red Maple Medium Variable Sapling	
Canopy Species % Cover Size Class DBH Age Black/Red (Hybrid) Oak 80 Log 12 95 White Oak 20 Log 12 Black/Red (Hybrid) Oak Low < 5 feet Sapling Red Maple Medium Variable Sapling Red Maple Medium Variable Sapling Red Maple Sapling North Final In May of 2013. La resulting from thinning last time mast and retention. Stand has respecies of regeneration. BA left fence. Old notes: STD THINNE REMOVED APPROX 30 BA 25 4126 - White, Black, N. Pin Oak Sapling Medium 18.3 16 1-50 N/A Scattered jack pine and oak are immature overall. Open cherry by	atural mortality of hybrid oak, white oak
Black/Red (Hybrid) Oak 80 Log 12 95 White Oak High Variable Sapling White Oak 20 Log 12 Black/Red (Hybrid) Oak Low < 5 feet Sapling Red Maple Medium Variable Sapling Red Maple Sapling National Sapling Red Maple Sapling Red Maple Sapling National Sapling Sapling National Sapling National Sapling Red Maple Sapling National S	s clump maple and oak stump sprouts as
Red Maple Medium Variable Sapling OPIC - FMD: Shelterwood under 13 SHL Final" in May of 2013. L resulting from thinning last time. mast and retention. Stand has r species of regeneration. BA left fence. Old notes: STD THINNER REMOVED APPROX 30 BA 25 4126 - White, Black, N. Pin Oak Sapling Medium 18.3 16 1-50 N/A Scattered jack pine and oak are immature overall. Open cherry by	ment this time to allow oak regen to grow
25 4126 - White, Black, N. Pin Oak Sapling Medium 18.3 16 1-50 N/A Scattered jack pine and oak are immature overall. Open cherry by	and is next to range 13.
13 SHL Final" in May of 2013. L resulting from thinning last time. mast and retention. Stand has r species of regeneration. BA left fence. Old notes: STD THINNE REMOVED APPROX 30 BA 25 4126 - White, Black, N. Pin Oak Sapling Medium 18.3 16 1-50 N/A Scattered jack pine and oak are immature overall. Open cherry b	r contract number 72-632-11-01 "Range
immature overall. Open cherry b	ots of pockets of white oak seedlings Can leave clumps or patches of oak for residual BA of 30. Will accept a mix of all heavier along trail bordering Range 13 D IN 1992 UNDER SALE #60-91-1,
	getting into the pole class but, still
	rush and jack pine in south (possibly a
Small nost pocket). Ned maple in	nore of a component in the north. Witch north side. Jack pine is heavier around
White Oak 25 Sapling 3 the edges of stand. Military "fox	hole" dug out and reinforced with
	st side.Old comment- (OPIC - FMD: sed old site index, which was Jack Pine.)
	gh stand. Most of the red oak looks to be
Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size decent quality. Red maple through comment- (OPIC - FMD: OI Sta	ghout, but heaviest to the west.Old
Bigtooth Aspen 17 Log/Pole 10 Witch Hazel Low 5 - 10 feet Tall Shrub	ind real origin was 1500)
Red Oak 38 Log/Pole/XLog 10 Red Maple Medium < 5 feet Sapling	
Red Maple 40 Pole/Log 8 51 White Oak Low < 5 feet Sapling	
White Pine Trace 5 - 10 feet Sapling	
	renced off to any public access old notes
Sub-Canopy Species Density Avg. Height Size brush.OPIC - FMD: FENCED NA	ATIONAL GUARD MOTAR RANGE.
Black/Red (Hybrid) Oak Low >20 feet Pole Upland Brush and Grasses. The	re are a few pockets of mature Oak in
Quaking Aspen Low >20 feet Pole the north end of range. Range is National Guard.	s burned on an yearly bases by the
	ninst grenade range. Changed age from
Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Size 62 to 54. West side of stand is a dominated.Old comments- (OPI)	spen dominated and east side is oak C - FMD: Oak stand mixed with
Bigtooth Aspen 30 Pole/Log 8 Witch Hazel Low 5 - 10 feet Tall Shrub Aspen and Red Maple. Long-teri	m military leased. Military trespass.
Red Maple 10 Pole/Sap/Log 8 13 fence.)	over into stand to widen trail along range
Red Oak 52 Log/Pole 10 54	over into stand to widen trail along range

Report 7 - Stands



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age B	A Range	Managed S	Site	General Comments		
29	122 - Road/Parking Lot	Nonstocked	9.3	0		Managed O	pening	Range 13 Road, outside of fence with managed shoulder for wildlife and fuel break.		
30	330 - Low-Density Trees	Nonstocked	91.8	0		412 - Oak	Types	Stand is coming back with primarily red maple. Oak is found scattered		
			Sub-Ca	nopy Species	Density	Avg. Height	Size	and also in fairly dense stems including white and hybrid oak. Other species includes cherry, witch hazel and other deciduous shrubs.		
			Black/Re	d (Hybrid) Oak	Low	< 5 feet	Sapling	Getting close to being a forested stand. Pretty heavy deer browse up		
			W	hite Oak	Low	< 5 feet	Sapling	along stand 42. There are areas with little to no regeneration. Merged		
			Re	d Maple	Medium	5 - 10 feet	Sapling	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,		
			Wit	ch Hazel	Low	5 - 10 feet	Tall Shrub	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		
31	4124 - Red with White Oak	Poletimber Mediun	n 4.0	54	51-80	N/A		Likely have a lot of trees with shrapnel in them. Keep an eye out for oak		
	Canopy Species % Cover Size Cl	ass DBH Age						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		
	Red Maple 10 Sapli	ng 4						west side. Changed age from 77 to 54.Old comment- (OPIC - FMD:		
	White Oak 20 Pole/Sa	pling 6						Active gernade range.)		
	Red Oak 65 Pol	e 7 54								
32	710 - Sand, Soil	Nonstocked	2.2			No		OPIC - FMD: GRAVEL PITS. Hills in nwsw sec 33.		



Stand	Level 4 Co	ver Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
33	4131 - As	spen, Oak	Size Class Sapling Sapling Sapling Sapling	Sapling N		121.0	5	Immature	N/A	one.	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
	4139 - Aspen, N	Aived Degi	duqua	Caplina	N/all	72.0		la matura	N/A		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.
(Canopy Species Quaking Aspen Red Maple k/Red (Hybrid) Oak		Size Class Sapling Sapling Sapling	Sapling DBH 1 1 1	Age 6 6 6	73.8	6	Immature	N/A		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	<u> </u>	ak S	awtimber	Medium Age	41.8	99	51-80	N/A		Stand was harvested under contract 72-602-11-01, with a residual BA of roughly 70.
	k/Red (Hybrid) Oak	100	Log	10							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 D	eciduous	Poletimb		29.7	42	111-140	N/A		Stand is starting to get some saw size trees, but still pole size overall.Old comment- (OPIC - FMD: NEAR NATIONAL GUARD
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	AMMO SUPPLY POINT.)
	k/Red (Hybrid) Oak	40	Pole/Log	8	42	Iro	onwood	Trace	5 - 10 feet	Sapling	,
Е	Bigtooth Aspen	25	Pole/Log	9			ed Maple	Low	Variable	Sapling	
	Red Maple	30	Pole/Sapling	g 5		Wit	ch Hazel	Low	5 - 10 feet	Tall Shrub	
						I	Beech	Trace	< 5 feet	Sapling	



Stand	Level 4 C	over Type		Size Der	nsity	Acres	Stand Age I	BA Range	Managed S	Site	General Comments			
37	4199 - Other Mixe	d Upland D	Deciduous Sa	wtimber	Medium	n 51.7	95	51-80	N/A		Long opening along northwest boundary. Heavy browse on maples in			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	Sub-Canopy Species		Avg. Height	Size	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			
	Sugar Maple	28	Log	12		Bigto	oth Aspen	Medium	10 - 20 feet	Sapling	rest. Stand will likely convert to red maple/aspen regardless of			
	Red Maple	24	Log	12		Wit	ch Hazel	Medium	5 - 10 feet	Tall Shrub	management.			
	Red Oak	35	XLog/Log	18	95	Re	d Maple	Medium	< 5 feet	Sapling	Old comments- (Stand was harvested under contract 72-602-11-01, with			
						Sug	ar Maple	Trace	< 5 feet	Sapling	a residual BA of 70. Stand was harvested in winter of 2013/14. OPIC -			
						E	Beech	Trace	Variable	Sapling	FMD: 2009: Even-aged Northern Hardwoods stand. With little to no			
						R	ed Oak	Trace	< 5 feet	Sapling	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;			
						Wh	nite Oak	Trace	< 5 feet	Sapling	pockets of Aspen and scattered Basswood and Beech along with the			
						Iro	nwood	Low	>20 feet	Sapling	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		- Aspen		Sapling		22.6	16	Immature	N/A		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-			
	Canopy Species	% Cover		DBH							01 - Two Stand Training Block. 05/01/2003 mm			
	Quaking Aspen	85	Sapling	3	16									
	Red Maple	10	Sapling	3										
39	710 - \$	Sand, Soil		Nonsto	cked	24.3	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.			
41	4124 - Red	with White	Oak S	Sawtimbe	r Well	57.7	95	51-80	N/A		Oak overstory with heavy red maple in sub-canopy (a lot in the 10-20'			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	and greater than 20' ranges). White oak present at medium density but, is heavily browsed and less than 5'. Some oak decline and pocket			
	Red Oak	78	Log/XLog	16	95	Wit	ch Hazel	Low	5 - 10 feet	Tall Shrub	mortality seen through stand. Aspen regen high in pockets, but medium			
	White Oak	20	Log/XLog	17		Re	d Maple	High	Variable	Sapling	to low overall.			
						Sug	ar Maple	Trace	Variable	Sapling	Old comments- (OPIC - FMD: Cut the aspen and maple, mark some			
						E	Beech	Low	Variable	Sapling	white oak to cut were it's a solid type. Stand was thinned in 2005-2006			
						R	ed Oak	Low	< 5 feet	Sapling	under contract 72-049-01-01 Cote Came Thin Block. No FTP was			
						Bigto	oth Aspen	Medium	>20 feet	Sapling	needed following the sale.)			
						Wł	nite Oak	Medium	< 5 feet	Sapling				
42	4123 -	Red Oak	5	Sawtimbe	r Well	42.1	95	141-170	N/A		North facing slope, mostly inoperable. Quality red oak.			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Old comments- (OPIC - FMD: Stand is very hilly. Per silviculturalist,			
	Red Oak	67	Log	12	95	Wit	ch Hazel	Medium	5 - 10 feet	Tall Shrub	recommend final harvest south slopes only. Leave north slopes alone.			
	Red Maple	25	Pole/Sap/Log	7		Iro	nwood	Low	< 5 feet	Sapling	Cut and expect a mix of natural regeneration of aspen, red maple, and			
						E	Beech	Trace	< 5 feet	Sapling	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			
						Re	d Maple	Low	< 5 feet	Sapling	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)			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age B	A Range	Managed S	ite	General Comments
43	122 - Road/Parking Lot	Nonstocked	18.4	18 I	Immature	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.
46	4126 - White, Black, N. Pin Oak	Sawtimber Poor	46.2	95	51-80	N/A		Patchy oak in sub-canopy low to med densities. Maple sprouts through
	Canopy Species % Cover Size Class		Sub-Ca	nopy Species	Density	Avg. Height	Size	most of stand. Open park like in areas with little to no sub canopy. Barb wire wrapped around an oak.
Blac	ck/Red (Hybrid) Oak 68 Log	13 95		d (Hybrid) Oak		Variable	Sapling	Old consists (ODIO FMD Dec 44/40/00 Occurs Decision according
	White Oak 28 Log/Pole	9 11		hite Oak	Low	Variable	Sapling	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
				ed Maple	Medium	10 - 20 feet	Sapling	Oak, Red Maple and some Aspen in the understory. Some of the Oak
				hite Pine	Trace	Variable	Sapling	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
			K	ed Pine	Trace	Variable	Sapling	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)
47	3102 - Grass	Nonstocked	0.8	0	Managed Opening			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	Nonstocked	0.8	0		Managed Opening		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.
49	3102 - Grass	Nonstocked	0.2	0		Managed Op	ening	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.
401	3102 - Grass	Nonstocked	0.6			No		Small grassy opening. OPIC - FMD: OI Stand Year Origin was
403	330 - Low-Density Trees	Nonstocked	3.2			No		OPIC - FMD: OI Stand Year Origin was
404	3102 - Grass	Nonstocked	2.2			No		OPIC - FMD: Looks like a Military barrow pit that's been sloped.
405	330 - Low-Density Trees	Nonstocked	22.2			No		Lineal opening with grass and scattered oak trees. Large debris and
				Sub-Canopy Species Black/Red (Hybrid) Oak		Avg. Height >20 feet	Size Log	stump pile along edge by the camp's bypass road. OPIC - FMD: Long narrow flat opening were Military vehicles park.
406	330 - Low-Density Trees	Nonstocked	4.7			No		OPIC - FMD: Near National Guard ammo supply point.

Report 7 - Stands



Stand	d Level 4 Cover Type			Level 4 Cover Type Size Densit				e BA Range	Managed Site	General Comments	
409	3102 - Grass			Nons	tocked	0.7			No	Shallow depression	
	4139 - Aspen, M Canopy Species Red Maple Quaking Aspen ck/Red (Hybrid) Oak	Wixed Decidence ### Cover 45 45 10 10 10 10 10 10 10 1		5 DB		25.2	14	Immature	N/A	Strip of trees that were harvested along the county line, regenerating back as aspen, red maple and some oak. Stems are 10-25' tall for aspen and maple and 5-10 for oak. OPIC - FMD: Narrow strip of grass and some regeneration of Aspen and Oak along the Crawford/Kalkaska line.	
412	330 - Low-D	Density Tre	es	Nons	tocked	10.4			No	OPIC - FMD: OI Stand Year Origin was	
413	330 - Low-Density Trees			Nons	tocked	9.2			No	OPIC - FMD: OI Stand Year Origin was	
421	330 - Low-Density Trees				tocked	4.2			No	Stump dump in the west half. Filliny in some w/ cherry brush	
437	7 3102 - Grass				tocked	1.6	0	Unspecified	No	Split grassy opening off of stand 37.	