

Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72187 Entry Year 2020 Acreage: 1,772

County Crawford

Management Area: Camp Grayling

Revision Date: 2018-07-11

Stand Examiner: Thomas Barnes

Legal Description:

Beaver Creek Township: T25N, R04W, Sections 4, 5, and 6.

Identified Planning Goals:

This compartment is comprised of Hanson Reserve Lands, which were deeded to the Military from the state and follow the deed restrictions: 1) Hanson Lands are to be used as a permanent encampment and maneuvering ground for the military and 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. These lands are open to hunting.

Soil and topography:

Soils consist of Grayling and Graycalm sands. These soils are somewhat excessively to excessively drained. This soil association covers about 40% of Crawford County. The majority of the topography in this compartment is somewhat level with hilly terrain being found along the northern and southern edges of section 4.

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

The public lands found in this compartment are Hanson Reserve Military Board Lands. On these lands military training has precedence over resource management activities. Hanson Reserve Lands were given to the National Guard, DMA by Rasmus Hanson in 1913, land within this compartment were deeded to the Military from the state. Hunting is allowed on these lands. The DNR will coordinate all prescribed activities with the National Guard to ensure they are compatible with military training needs. The majority of T25N R04W is under public ownership with scattered private parcels throughout. The southern portion of this Township has been extensively developed by oil and gas interests.

Unique Natural Features:

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

Archeological, Historical, and Cultural Features:

There are a couple locations that have been identified throughout the compartment. Though these locations have not been deemed significant, precautions will need to be taken during timber sale preparation and administration as well as during other planned intrusive activities.

Special Management Designations or Considerations:

Military training has precedence on these lands.

Watershed and Fisheries Considerations:

None at this time.

Wildlife Habitat Considerations:

Try to promote and expand aspen cover types where possible. Attempt to improve snag habitat as well as down-dead woody debris during timber management. Wildlife Division is cooperating with Military on planting firing points and area long range 13 road to wildlife vegetative mixture.

Mineral Resource and Development Concerns and/or Restrictions

Active sand/gravel pits are not located in the area, but sand & gravel potential appears to be good within the compartment. There are active state oil & gas leases in the area, and the compartment is located just north of the Beaver Creek Field, which is producing oil from the Detroit River Group and gas from the Prairie du Chien (St. Peter). The Detroit River production is undergoing secondary recovery operations currently. The field is unlikely to expand into the compartment. No

known metallic mineral potential exists in this part of the state. The state does not own the mineral rights beneath the compartment. Private mineral rights owners must be allowed reasonable access to the surface should they choose to explore and/or develop the minerals.

Vehicle Access:

Range 13 is not open to public travel due to the possibility of unexploded ordinances. The rest of the compartment is easily accessible by county roads and forest two-tracks.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

Dispersed recreation occurs throughout the compartment. Hunting is allowed on these lands. ORV's will be prohibited on forested two tracks.

Fire Protection:

Range 13 is prone to frequent fire events. Fuel types to the east of the range are low risk hardwood fuel types. There are potential hazardous fuel types north, west, and south of the range. With unfavorable wind directions, explosive fire events are a possibility in this area. The lands to the south should be considered "no plow areas" because there is extensive H²S oil and gas activity as well as exposed above ground pipe lines.

Additional Compartment Information:

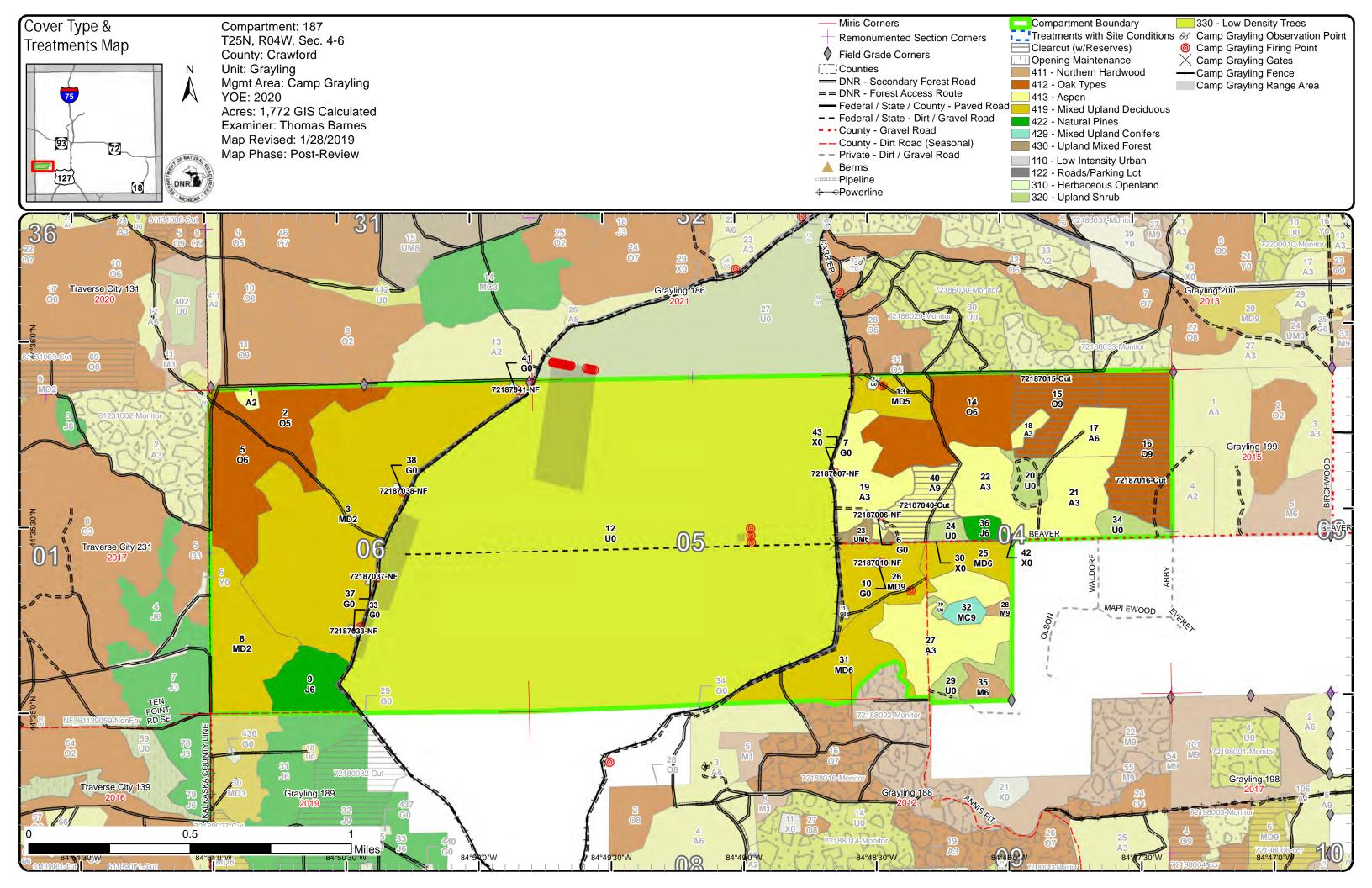
Autumn olive can be found in the stands along Beaver Road. Range 13 and Range 15 are found in this compartment. Several firing points associated with these ranges are scattered throughout. These firing points should be protected during timber sale operations.

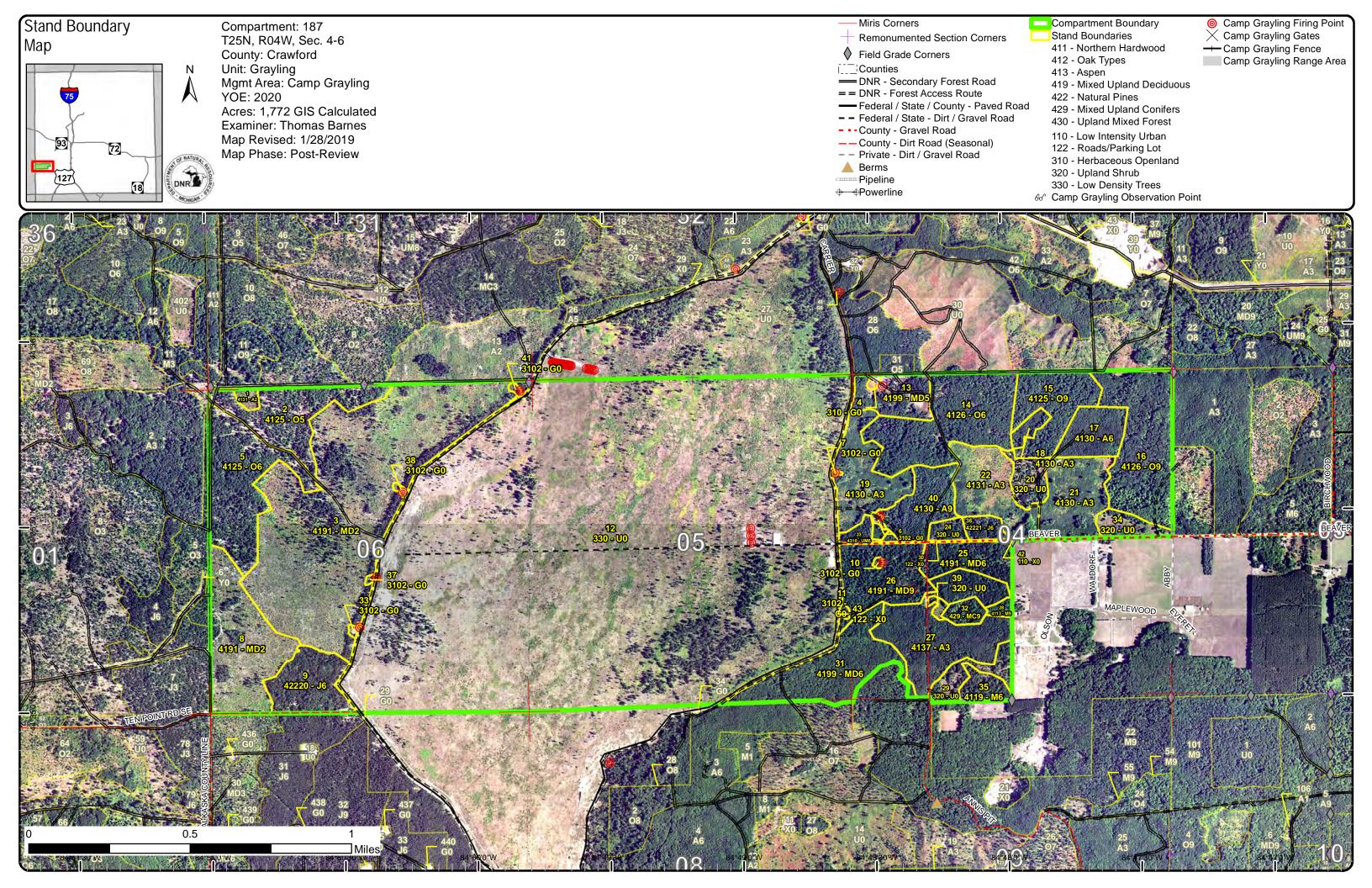
The following reports from the Inventory are attached:

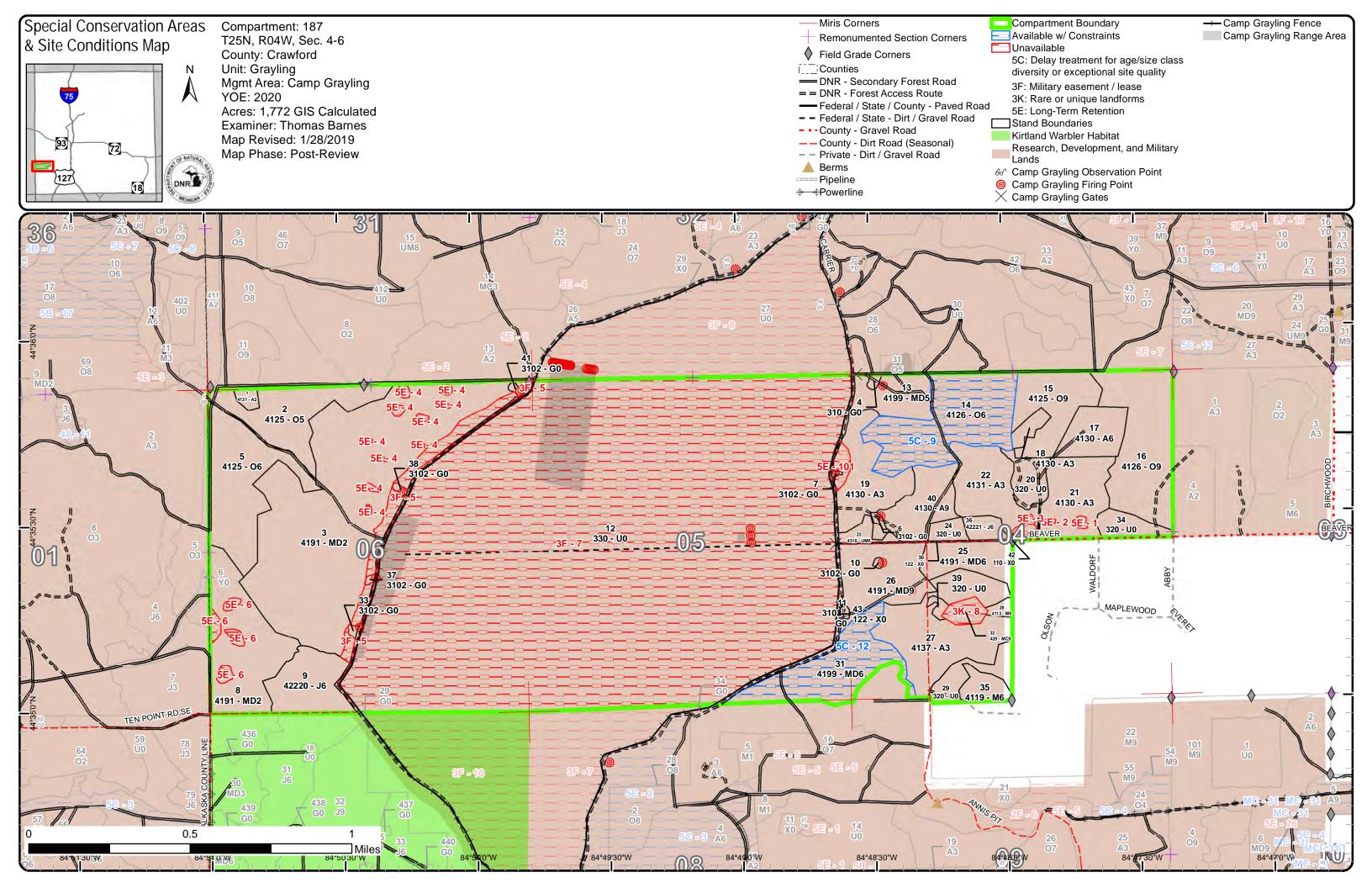
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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 187 Year of Entry 2020



Age Class

			,	,		,		,		,		,		,					<u>, , , , , , , , , , , , , , , , , , , </u>
	No.	A STANCE OF) } \	, S.	/ § /&						,			,	g* Juo	Se S
Aspen	0	98	0	59	18	0	0	23	0	0	0	0	0	0	0	0	0	0	198
Herbaceous Openland	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Jack Pine	0	0	0	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	32
Low-Density Trees	855	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	855
Mixed Upland Deciduous	0	261	0	0	0	0	52	19	0	43	0	0	0	0	0	0	0	0	375
Northern Hardwood	0	0	0	0	0	0	8	0	0	2	0	0	0	0	0	0	0	0	10
Oak	0	0	0	0	37	0	52	0	0	59	86	0	0	0	0	0	0	0	234
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5
Upland Mixed Forest	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	4
Upland Shrub	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Urban	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Total	914	359	0	59	55	32	117	42	0	104	86	0	0	0	5	0	0	0	1772



Report 2 – Treatment Summary

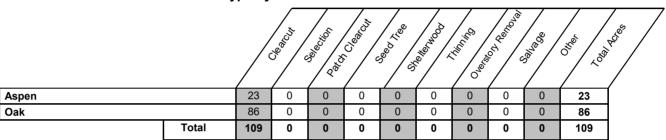
Grayling Mgt. Unit Year of Entry: 2020

Acres of Harvest

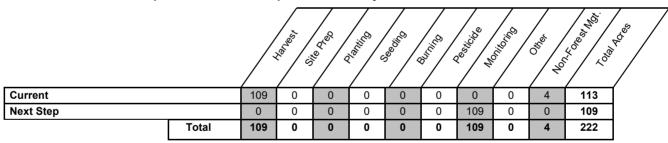
Compartment 187
Total Compartment Acres: 1,772

Commercial Harvest - 109 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



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

Next Step

Treatments:

Acceptable

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 /2019 Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Poor to medium stocked stand of oak. Also acceptable is a medium to well stocked stand with at least a 40 percent oak component along with a

Regen: mixture of aspen and maple.

Other Comment:

Proposed Start Date: 10/1 /2019

4126 - White, 4199 - Other 16 72187016-Cut 56.1 Sawtimber 94 51-80 Harvest Clearcut with Even-Aged **Draft Field** Black, N. Pin Oak Well Retention Mixed Upland Boundary Deciduous

Habitat Cut: No Site Condition:

Prescription Final harvest with retention, follow standard retention guidelines. Apply military specs.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Poor to medium stocked stand of oak. Also acceptable is a medium to well stocked stand with at least a 40% oak component, other species to

Regen: include maple and aspen.

Other This stand does have two recent clearcuts on the north and east sides could be held if desired.

Comment:

Proposed Start Date: 10/1 /2019

0.6 310 -Draft Field 72187033-NF 3102 - Grass Nonstocked Unspec NonForestMgt Herbaceous/Crop ified /Grass Planting Herbaceous Boundary Openland

Site Condition: Habitat Cut: No

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 /2019 Regen:

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

Comment:

10/1 /2019 **Proposed Start Date:**

Draft Field 0.7 310 -38 72187038-NF 3102 - Grass Nonstocked Unspec NonForestMgt Herbaceous/Crop /Grass Planting Boundary ified Herbaceous Openland

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, Specs:

brushing, tree and shrub planting and herbicide application.

Next Step **Treatments:**

Acceptable 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 /2019

40 72187040-Cut 22.7 4130 - Aspen Sawtimber 63 51-80 Harvest Clearcut with 413 - Aspen Even-Aged **Draft Field** Well Retention Boundary

Site Condition: **Habitat Cut: No**

Prescription Final harvest with retention, follow standard retention guidelines. Use grouse and military specs to include chipping and low stumps. Retention

should primarily be island retention. Protect firing point. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Meduim to well stocked stand of aspen with some maple and oak.

Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

72187041-NF 0.7 3102 - Grass 0 NonForestMgt Herbaceous/Crop 310 -Draft Field Nonstocked Unspec /Grass Planting Boundary ified Herbaceous

Openland

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, Specs:

brushing, tree and shrub planting and herbicide application.

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 /2019

Total Treatment 114.5 Acreage Proposed:

Compartment: 187

Grayling Mgt. Unit

Thomas Barnes : Examiner Year of Entry: 2020

Availability for Management

Total Acres Acres Avail Acres

Acres Available With Condition Not Available

5C 3F 3K 5E

					5 0a.			41610116
Acres	Available	With Condition	Not Available		5C	3F	3K	5E
197	190	0	7	Aspen	0		0	7
6	5	0	0	Herbaceous Openland		0		0
32	32	0	0	Jack Pine				
855	0	0	855	Low-Density Trees		855		
375	304	43	28	Mixed Upland Deciduous	43	19		9
10	10	0	0	Northern Hardwood				
234	175	59	0	Oak	59			
5	0	0	5	Upland Conifers			5	
4	4	0	0	Upland Mixed Forest				
38	38	0	0	Upland Shrub				
15	12	0	3	Urban	0	2		0
1,772	771	102	899	Total Forested Acres	102	877	5	17
	44%	6%	51%	Relative Percent			-	-

*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
2	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
3	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Grayling Mgt. Unit

Thomas Barnes : Examiner

4	Unavailable	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	3F: Military easement / lease	22	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
	Comments: Visual buffer aroun	nd military firing points and also s	stand r	etention for former stand 7 v	which was merged with sta	and 3.	
3	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	3F: Military easement / lease	855	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Fenced Range 13						
3	Unavailable	3K: Rare or unique landforms	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Unique stand with	heavy presence of hemlock. Sit	te does	ւ have an ephemeral runninզ	g thru it as well.		
)	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	59	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Grayling Mgt. Unit

Compartment: 187 Year of Entry: 2020 **Thomas Barnes: Examiner**

12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	43	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
101	Unavailable	5E: Long-Term Retention	4	3F: Military easement / lease	Unspecified	Unspecified	Unspecified
	omments: etention from sta	nd 19's timbersale also protects	a firinç	ı point.			

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: 187





Report 6 - EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

Conservation	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Research and Military 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 (thigh 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.	00 acre Houghton Lake Wildlife Research hat includes most of Garden Island, all of ox and North Fox Islands), the Cusino
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and coo U.S. Fish and Wildlife service for the recovery of threatened and 365, Endangered Species Protection, of the Natural Resources PA 451, and the Federal Endangered Species Act of 1973. This species plans in various stages of review. As of now only two elever Habitat.	d endangered species, as governed by Part and Environmental Protection Act, 1994 s is an active program, with proposed

s t	Grayling	Grayling Mgt. Unit				I Stands Compartment: 187 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4131 - Aspen, Oak	Sapling Medium	2.6	7	Immature	Stand was harvested in 2012. Coming back as a mixed stand dominated by aspen. Good density and young stand.
						OPIC - FMD: 2007: Stand smaller than originally thought. There is an O4/O7 belt around it(stand 11). If treated extend sale into stand 11 to try and expand the aspen. Poor quality for the most part, but has a few pockets of OK looking aspen. Occasional oak and red maple can be found in stand. No retention. Stand should regenerate to a moderate to fully stocked aspen stand with minor components of oak and maple. If stand does not properly regenerate it should be planted to jack pine or white pine. (old comments) STAND JUST BECOMEING POLE SIZE. TREAT NEXT YOE. 3/15/12 stand treated under Big Burn Jack 72-605-10-01.
2	4125 - Black, N. Pin Oak	Poletimber Medium	37.2	37	1-50	Open Stand wit oak and maple dumps. Pole size with both sapling and log sizes. of oak Scattered log size red t white pine. OPIC - FMD: UPDATE: FTP C72-633 submitted 12/22/09 this is considered a potential 2013 burn. Burn along with stands 3 and 7. Possibly some advanced regen left from the last treatment. Several open areas-maybe due to past frost damage? Some aspen and red pine also found in stand but it is poor quality. Much of regen has not reach merchentable size. (old comments) OPENING WITH POCKETS OF CHERRY AND ASPEN. Stand was final harvest 1980.
3	4191 - Mixed Upland Deciduous with Conifer	Sapling Medium	206.1	7	Immature	Stand has regenerated nicely along with other stands cut at same time. This stand seems to have a higher presents of cherry. Red and white pine are scattered along with mature oak. Dominate size is sapling. There are open or less dense area throughout stand. OPIC - FMD: UPDATE: FTP C72-633 submitted 12/22/09 this is considered a potential 2013 burn. About a 3 acre pocket of poor quality aspen in NE corner. Excellent intermediate oak regen but it is already around 30yrs old. Dead and dieing jack pine found throughout. The jack pine seems to have 2 distinct age classes 40ish and 70ish. Debris from military can be found throughout. This stand borders Range 13. A very small amount of white and red pine regen. Final harvest w/ reserves (see stand 100). Set up sale and burn with stands 7, 8, 38 to try and achieve natural regen. Mark out a handful of the bigger oak to leave for vertical structure and mast. Leave/protect red pine, and white pine. Also include several small islands (up to .5 acres in size) that include the better quality jack pine and smaller diameter oak. (de-limbing optional in this stand). Look for differences (or lack of) in stem densities, species diversity, and failed regen areas between the different stands in the sale area during regeneration surveys. Stand should regenerate to a moderate or fully stocked mixture of jack pine and oak with pockets of aspen and mixed pine. Open "pine barren" type areas are expected and acceptable. Make sure to buffer the military firing points and any corners(see stand 100). 3/15/12 stand treated under Big Burn Jack 72-605-10-01.
5	4125 - Black, N. Pin Oak	Poletimber Well	51.5	52	51-80	OPIC - FMD: UPDATE: FTP C72-633 submitted 12/22/09 this is considered a potential 2013 burn. Burn along with stands 3 and 7. O4/O5. Open u-type pockets throughout. Another 2 age class stand 70+ and 30-40ish. The aspen is poor quality. Some areas of oak regen are doing very well. Perhaps an old diameter limit cut in this stand? A small amount of natural pine regen found in southern part of stand.

S t	Grayling	Mgt. Unit		Report 7	- Forested	Stands Compartment: 187 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
8	4191 - Mixed Upland Deciduous with Conifer	Sapling Medium	54.8	7	Immature	Stand is regenerating well naturally. Stump sprout oak and natural jack pine are dominating.
						OPIC - FMD: UPDATE: FTP C72-633 submitted 12/22/09 this is considered a potential 2013 burn. Lots of dead oak and jack pine in stand. This stand is older than it looks. It does have the two age class structure like the rest of the stands on this side of the range. Some pockets of OK regen-this stand is fairly open throughout. Jack pine makes up more of the south. Final harvest w/ reserves. Leave some islands of healthy oak and jack pine. Cut and burn with stands 3, 7, and 38, the management objective is oak but any natural regen at \minimum or higher stocking with an oak component will be considered a success. See stand 7 for regen survey comments. (old comments) LOW QUALITY JP, NPO. OAK CONCENTRATIONS IN THE NORTH, JP IN SOUTH AREAS WITH O2, J3 THROUGHTOUT, OPEN AREAS <1 ACRE PERSIST). 3/15/12 stand updated under Big Burn Jack 72-605-10-01.
9	42220 - Natural Jack Pine	Poletimber Well	26.4	49	51-80	Pole size sad pine with very few scattered oak t jack pine boys. Few pockets of sapling to pole size aspen. OPIC - FMD: UPDATE: FTP C72-633 submitted 12/22/09 this is considered a potential 2013 burn. Burn along with stands 3 and 7. A couple big red pine and oak. Smallish jack pine, it will most likely be a J6 next YOE. Consider managing with adjacent southern compartment. A couple open u-type areas. Year of origin was estimated. (old comments)A J3 STAND WITH SCATTERED OAK ALONG THE EDGE OF THE STAND
13	4199 - Other Mixed Upland Deciduous	Poletimber Medium	18.9	56	51-80	Stand is forested, however, stand is be mud along perimeter. Stand should be treated when Stand 14 is treated. Currenty military range.OPIC - FMD: RANGE 17. GRENADE RANGE NOT FENCED OFF. Several berms and open x-type areas. Perimeter of stand is posted close.
14	4126 - White, Black, N. Pin Oak	Poletimber Well	59.1	85	81-110	South aspect with better quality at lower portion of slope. Pockets of good maple and aspen from previous treatment. Not consistent enough to call 2 aged. white oak is pole small log, while hybrid oak is large pole small log, There is enough boys in to bump up into log size. Health appears good hold till next YoE. Five BA swing taken with Stand average being 72. BA for who is 24, hybrid oak is 46, and REM is 2. OPIC - FMD: 2007: Stand is on a slope with a southern aspect. The higher up the slope the poorer the quality of oak. Many red maple stump sprouts reaching 10 feet. Aspen regen is scattered in isolated pockets. There are several pockets w/ noticeable white oak regen- but it is small stuff.(old comments) CUT ALL ASPEN AND RED MAPLE LEAVE ALL OAK. Stand thinned 2001.
15	4125 - Black, N. Pin Oak	Sawtimber Well	30.0	94	51-80	Stand very similar to stand 16. Less terrain in this Stand and no hardwood component. Four BA swing taken with stand average of 70.
						OPIC - FMD: 2007: DECENT LOOKING OAK, POCKETS OF A3. THERE SEEMS TO BE A HIGHER BA OF OAK ON THE WEST SIDE OF THE STAND. POORER QUALITY OAK IN THE SOUTHERN FINGURE. HOLD TEN YEARS AND HARVEST OAK AND THE ASPEN/RED MAPLE POCKETS. SOME SAWLOG WHITE OAK PRESENT (old comments) STAND THINNED 1990. HEAVY RED MAPLE STUMP SPROUTS.

S t	Grayling	g Mgt. Unit		Report 7	– Forested	Stands Compartment: 187 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	4126 - White, Black, N. Pin Oak	Sawtimber Well	56.1	94	51-80	Rolling to steep terrain is northern portion of stand. Southern portion has a hardwood component. Beech does have BBD, however, very min or component of Stand. Understory is sporadic in density for all species. Aspen on interior of stand is dying out naturally. OPIC - FMD: 2007: Hilly. There is a belt of norther hardwoods along the southern edge of stand. All oak left in sale. A couple of nice pockets of white oak regen. Pretty good looking oak.(old comments) Nice healthy oak Hilly terrain. May need to mark pockets of oak to 70 BA. Leave red maple (cut aspen only). All aspen was harvested and some individual oak trees were marked for harvesting. Average residual of 75BA was left. Timbersale # 721300-01.
17	4130 - Aspen	Poletimber Well	17.8	36	51-80	Pole sized aspen stand with clump maple and oak stems. OPIC - FMD: Mixed aspen with scattered red maple. This is a immature A4/A5 going on an A6. Still bunches of trees that are not merchantable. There is a minor conifer component in the understory. Still A3-ish in many spots. Some oak stump sprouts present as well.
18	4130 - Aspen	Sapling Well	4.3	29	Immature	Aspen and red maple approx. 15-20' tall. A few wolfy oak.
19	4130 - Aspen	Sapling Well	32.8	7	Immature	Great regenerating stand of a spa with maple and oak. Understory is heavy in areas to raspberry. FP 13-5.OPIC - FMD: STAND BORDERS RANGE 13. This stand is a hodge podge. The aspen is mixed. Stand looks as though it has seen its share of disturbances from the military, range, and public. There was a deer camp set up in this stand for the 1st couple weeks of bow season. Final harvest w/ reserves (see stand 101). Harvest all species 2" and up. Leave scattered large healthy oak trees. The management objective for this stand is aspen with some scattered oak and red maple at moderate to full stocking. If natural regeneration is not adequate the stand should be planted to mixed pine around any natural regen. Old SI used. Protect FP 13-6 from harvest operations. 5/3/12 stand treated under Autumn Olive Aspen 72-604-10-01.
21	4130 - Aspen	Sapling Well	31.1	7	Immature	Great aspen regeneration. Merging with stand33. Both stands pas regen survey. OPIC - FMD: 2007: Aspen is mixed but the majority seems to be big tooth. A few dead broken tops. Some wolfy red pine and maple. Final harvest no retention. May want to leave a couple of the real big sugar maple or red pine for visual. Autumn olive found in southern portions of the stand. This stand will regenerate to a moderate to fully stocked aspen stand with scattered hdwds and a minor conifer component. If natural regeneration fails the stand should be planted to red pine. (old comments)YOUNG ASPEN STAND 6"-7" DIA. 5/3/12 stand treated under Autumn Olive Aspen 72-604-10-01.

s t	Grayling	ı Mgt. Unit		Report 7	Forested	Stands Compartment: 187 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4131 - Aspen, Oak	Sapling Well	31.1	7	Immature	Nice young Stan regenerating back to u mix of a spa and oak. More Oak in Northern 1/3 of stand.
						OPIC - FMD: 2007: A nice mixed stand. The oak seems to be doing alright. Scattered stems of wolfy oak with aspen pockets and plenty of small diameter red maple. Most of the sugar maple is in the southeast part of the stand along Beaver Rd. Not much for natural regen on the ground. Some big red pine in the southeast providing a nice seed source (leave these trees) A final harvest now would ensure that the diversity of the stand is maintained. Final harvest w/ reserves. Leave a buffer along beaver road as retention. Also leave the big red pine and sugar maple found in the southeast. There is autumn olive found in stand along Beaver Rd. The management objective is oak, but any moderate to fully stocked stand with components of oak, maple, aspen, and mixed pine should be considered a success. If natural regen fails plant the stand to red pine.(old comments) LOW QUALITY HARDWOOD STAND. HYBRID OAK, GYSPY MOTH EGG MASSES. 5/3/12 stand treated under Autumn Olive Aspen 72-604-10-01.
23	4310 - Pine, Oak Mix	Poletimber Well	4.5	59	51-80	OPIC - FMD: 2007: Jack pine, younger oak, and a couple pockets of aspen. Leave for visual. (old comments)MIXTURE OF ASPEN, JACK PINE. SCATTERED OPENING < 1/4 ACRE. SMALL ASPEN CLONE < 1/4 ACRE.
25	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	19.0	67	51-80	Stand is a Heinz 57 mixture with autumn olive along the beaver road. Stand is primarily dominated by jack pine and aspen neither of good form. There area few areas that are open but not large enough to separate out. Stand is also heavy to pole sized cherry. Four BA swings were taken with a stand average of 80. OPIC - FMD: Hodge podge. Autumn olive along Beaver Rd. Especially in NE corner of stand. Some scattered wp regen. Actually some fairly decent looking cherry in areas.
26	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	32.9	57	1-50	There is a sparse/pockety residual of red pine and mixed oak. Pockets of aspen and jack pine regen thoughout. A few areas with noticeable oak regen. In general, red pine component is in the north and the oak component is in the south. Firing point 13-7is located within stand. OPIC - FMD: 2007:.(old comments)SOUTHERN HALF HAS VERY GOOD ADVANCE OAK REGEN. AVG. 10' IN HEIGHT. Protect pockets of regeneration. Stand harvested summer 2002
27	4137 - Aspen, Birch	Sapling Well	54.7	29	Immature	Mixed aspen stand w/ poles and sapling diameter stems. Good ste density. Mix shrubs in understory w/some white pine. OPIC - FMD: Mixed A3 ranging in diameter from 2-4". Some cherry and hawthorne in the understory. A minor conifer component in the understory. Open U-type areas scattered throughout. FINAL HARVEST 1990. HEALTHY STAND.
28	4113 - R.Maple, Conifer	Sawtimber Well	2.2	89	111-140	Stand is heavy to red maple of log and pole size with poor quality stems. There is some presence of white pine and hybrid oak. Two BA swings were taken with stand average of 125. OPIC - FMD: 2007: White pine and hemlock is starting to appear in the understory. Some oak saplings are also present. May want to leave stand to encourage hemlock - white pine.(old comments) LEFT AS A BUFFER STRIP.

s t	Grayling	ı Mgt. Unit		Report 7	– Forested	Stands Compartment: 187 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	4199 - Other Mixed Upland Deciduous	Poletimber Well	42.9	87	51-80	Aspen removed in 2002 and some pockets of good regen, otherwise it is dying out. Stand is on the line of being a log sized stand but will place it there. Oak is not greatest form but does appear to be healthy. Red maple is more on the pole size with oak being more log. There is some scattered aspen that were missed as well as some white oak. Stand can old for another 10 years. Five BA swings were taken with stand average of 75. OPIC - FMD: 2007: All aspen removed from stand in 2002. The oak is getting way up in years but does not seem to be poor in quality. There is decent aspen regen in the pockets where enough sunlight is hitting the ground. Very little residual damage that I could see which is impressive with some of the tight spots found in the stand. I recommend letting the aspen pockets establish themselves for another 10yrs and then maybe final harvesting everything 2" in up to maintain a mixed stand and to help expand the aspen component. The old SI was in the high 60's (old comments)Selection cut LEAVE ALL OAK and RED MAPLE. Stand harvested sumer 2002.
32	429 - Mixed Upland Conifers	Sawtimber Well	5.4	134	111-140	Unique stand for the area, appears to be an ephemeral that has emerged for a short bit as ground cover is leatherleaf and sphagnum moss ground saturated with stand water. Ephemeral runs from NE to SW thru the stand. Hemlock and white pine dominate most of the stand and once out of wetter area red pine is growing. Very little understory. Three BA swings were taken with stand average of 135. OPIC - FMD: Some hemlock regen -but very little. Open ares in stand starting to fill in with white pine. Very little ground cover. Hemlock is in the NE and SE. Red pine is found along eastern edge. (3 separate stands could probably be typed out). A few stubby oak seedlings can be found. Would not expect to find this stand here. If or when treatments happen in or around stand-I would recommend dropping some large conifer nurse logs to try and establish some hemlock regen. Protect stand from future operations
35	4119 - Mixed Northern Hardwoods	Poletimber Well	8.0	50	1-50	Thick iron wood in spots. Mixture of aspen clones, mixed hdwd, and pine. Some real big sugar maple and oak. The only constant is the iron wood in the understory.
36	42221 - Natural Jack Pine, Mixed Deciduous	Poletimber Well	5.6	44	51-80	Small little stand along Beaver Rd with a descent amount of autumn olive in stand. Stand does have some birch in it but is dominated by pole sized jack pine. OPIC - FMD: Jack pine and birch? Unique little stand.
40	4130 - Aspen	Sawtimber Well	22.7	63	51-80	Large pole small lay aspen stand that is ready for treatment. Understory is maple and aspen. Some scattered oak, pine. FP 13-6. OPIC - FMD: Old SI and origin. Poorer quality than stand 19. Areas is influenced by military operations and escaped range fires.



Stand	Cover Type	Acres	Managed Site	General Comments:
4	310 - Herbaceous Openland	1.0	Yes	Stand is forested, however, stand is be mud along perimeter. Stand should be treated when Stand 14 is treated. Currenty military range.OPIC - FMD: RANGE 17. GRENADE RANGE NOT FENCED OFF. Several berms and open x-type areas. Perimeter of stand is posted close.
6	3102 - Grass	0.8	Yes	Managed wildlife opening and military firing point.
7	3102 - Grass	0.3	Yes	Wildlife opening, partnership with Camp Grayling. FP 13-5. OPIC - FMD: STAND BORDERS RANGE 13. This stand is a hodge podge. The aspen is mixed. Stand looks as though it has seen its share of disturbances from the military, range, and public. There was a deer camp set up in this stand for the 1st couple weeks of bow season. Final harvest w/ reserves (see stand 101). Harvest all species 2" and up. Leave scattered large healthy oak trees. The management objective for this stand is aspen with some scattered oak and red maple at moderate to full stocking. If natural regeneration is not adequate the stand should be planted to mixed pine around any natural regen. Old SI used. Protect FP 13-6 from harvest operations. 5/3/12 stand treated under Autumn Olive Aspen 72-604-10-01.
10	3102 - Grass	0.5	Yes	Wildlife opening, partnership with Camp Grayling.
11	3102 - Grass	0.7	Yes	Wildlife opening, partnership with Camp Grayling.
12	330 - Low-Density Trees	855.2	No	Scattered pockets of mature trees, oak, aspen, maple and jack pine. Range 13 restricted access. OPIC - FMD: RANGE 13. (MORTAR) Stand is open and brushy w/ scattered islands of oak/aspen/jack. This area is burned over just about every year. There are some National Guard Structures and old junked out cars.
20	320 - Upland Shrub	10.4	No	Keeping as u typ as cherry is not merchantable. OPIC - FMD: Open U-type but cherry, pine, and misc hdwds are starting to fill in. A couple sawlog red pine.
24	320 - Upland Shrub	4.6	No	UPLAND BRUSH WITH SCATTERED OAK ,ASPEN, RED MAPLE. Separated this stand from stand 36. Some invasive concerns along Beaver Rd.
29	320 - Upland Shrub	12.0	No	Adjacent farms have established well used horse trails across the openings. There is a couple bushes of autumn olive in the stand. Scattered jack pine and white pine regen w/ areas of cherry. Hawthorne, service berry and a ground juniper present as well
30	122 - Road/Parking Lot	1.6	No	Beaver Rd



Stand	Cover Type	Acres	Managed Site	General Comments:
33	3102 - Grass	0.6	Yes	Wildlife opening, partnership with Camp Grayling.
				OPIC - FMD: UPDATE: FTP C72-633 submitted 12/22/09 this is considered a potential 2013 burn. About a 3 acre pocket of poor quality aspen in NE corner. Excellent intermediate oak regen but it is already around 30yrs old. Dead and dieing jack pine found throughout. The jack pine seems to have 2 distinct age classes 40ish and 70ish. Debris from military can be found throughout. This stand borders Range 13. A very small amount of white and red pine regen. Final harvest w/ reserves (see stand 100). Set up sale and burn with stands 7, 8, 38 to try and achieve natural regen. Mark out a handful of the bigger oak to leave for vertical structure and mast. Leave/protect red pine, and white pine. Also include several small islands (up to .5 acres in size) that include the better quality jack pine and smaller diameter oak. (de-limbing optional in this stand). Look for differences (or lack of) in stem densities, species diversity, and failed regen areas between the different stands in the sale area during regeneration surveys. Stand should regenerate to a moderate or fully stocked mixture of jack pine and oak with pockets of aspen and mixed pine. Open "pine barren" type areas are expected and acceptable. Make sure to buffer the military firing points and any corners(see stand 100). 3/15/12 stand treated under Big Burn Jack 72-605-10-01.
34	320 - Upland Shrub	8.9	No	Slowly becoming more forested, however, keeping as a grassy opening w/ pockets of brush and trees. Autumn olive present as well as a clone of white popal. There is scattered mixed pine and hdwds, and a clone of QA.
37	3102 - Grass	0.4	Yes	Wildlife opening, partnership with Camp Grayling.
				OPIC - FMD: UPDATE: FTP C72-633 submitted 12/22/09 this is considered a potential 2013 burn. About a 3 acre pocket of poor quality aspen in NE corner. Excellent intermediate oak regen but it is already around 30yrs old. Dead and dieing jack pine found throughout. The jack pine seems to have 2 distinct age classes 40ish and 70ish. Debris from military can be found throughout. This stand borders Range 13. A very small amount of white and red pine regen. Final harvest w/ reserves (see stand 100). Set up sale and burn with stands 7, 8, 38 to try and achieve natural regen. Mark out a handful of the bigger oak to leave for vertical structure and mast. Leave/protect red pine, and white pine. Also include several small islands (up to .5 acres in size) that include the better quality jack pine and smaller diameter oak. (de-limbing optional in this stand). Look for differences (or lack of) in stem densities, species diversity, and failed regen areas between the different stands in the sale area during regeneration surveys. Stand should regenerate to a moderate or fully stocked mixture of jack pine and oak with pockets of aspen and mixed pine. Open "pine barren" type areas are expected and acceptable. Make sure to buffer the military firing points and any corners(see stand 100). 3/15/12 stand treated under Big Burn Jack 72-605-10-01.
38	3102 - Grass	0.7	Yes	Wildlife opening, partnership with Camp Grayling.
				OPIC - FMD: UPDATE: FTP C72-633 submitted 12/22/09 this is considered a potential 2013 burn. About a 3 acre pocket of poor quality aspen in NE corner. Excellent intermediate oak regen but it is already around 30yrs old. Dead and dieing jack pine found throughout. The jack pine seems to have 2 distinct age classes 40ish and 70ish. Debris from military can be found throughout. This stand borders Range 13. A very small amount of white and red pine regen. Final harvest w/ reserves (see stand 100). Set up sale and burn with stands 7, 8, 38 to try and achieve natural regen. Mark out a handful of the bigger oak to leave for vertical structure and mast. Leave/protect red pine, and white pine. Also include several small islands (up to .5 acres in size) that include the better quality jack pine and smaller diameter oak. (de-limbing optional in this stand). Look for differences (or lack of) in stem densities, species diversity, and failed regen areas between the different stands in the sale area during regeneration surveys. Stand should regenerate to a moderate or fully stocked mixture of jack pine and oak with pockets of aspen and mixed pine. Open "pine barren" type areas are expected and acceptable. Make sure to buffer the military firing points and any corners(see stand 100). 3/15/12 stand treated under Big Burn Jack 72-605-10-01.



Stand	Cover Type	Acres	Managed Site	General Comments:
39	320 - Upland Shrub	1.7	No	Patches of cherry, scattred jack and aspen clones.
41	3102 - Grass	0.7	Yes	Wildlife opening, partnership with Camp Grayling. OPIC - FMD: UPDATE: FTP C72-633 submitted 12/22/09 this is considered a potential 2013 burn. About a 3 acre pocket of poor quality aspen in NE corner. Excellent intermediate oak regen but it is already around 30yrs old. Dead and dieing jack pine found throughout. The jack pine seems to have 2 distinct age classes 40ish and 70ish. Debris from military can be found throughout. This stand borders Range 13. A very small amount of white and red pine regen. Final harvest w/ reserves (see stand 100). Set up sale and burn with stands 7, 8, 38 to try and achieve natural regen. Mark out a handful of the bigger oak to leave for vertical structure and mast. Leave/protect red pine, and white pine. Also include several small islands (up to .5 acres in size) that include the better quality jack pine and smaller diameter oak. (de-limbing optional in this stand). Look for differences (or lack of) in stem densities, species diversity, and failed regen areas between the different stands in the sale area during regeneration surveys. Stand should regenerate to a moderate or fully stocked mixture of jack pine and oak with pockets of aspen and mixed pine. Open "pine barren" type areas are expected and acceptable. Make sure to buffer the military firing points and any corners(see stand 100). 3/15/12 stand treated under Big Burn Jack 72-605-10-01.
42	110 - Low Intensity Urban	0.0	No	
43	122 - Road/Parking Lot	13.7	Yes	Range 13 Road outside of fence, with managed shoulder for wildlife and fuel break.