

Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72266 Entry Year 2019 Acreage: 1,344

County Crawford

Management Area: Camp Grayling

Revision Date: 2017-09-05

Stand Examiner: Thomas Barnes

Legal Description:

T28NR2W Sections 22, 23, 24 NW Lovells Township

Identified Planning Goals:

To provide an area that allows for National Guard training while maintaining forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment.

Soil and topography:

Soils within this compartment belong to the Grayling-Klackling complex. This soil association is typical of flats, low knolls, outwash plains and moraines. The soils are well-drained, often excessively-drained and have slight hazards for water erosion. Wind erosion can be an issue if the vegetative cover is lost. Major management concerns within this soil complex include equipment limitation, seedling mortality and plant competition.

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

Ownership within this compartment includes mostly state land. There is an area of county owned land used as a gravel pit. A mix of Military board and lease lands are present throughout the compartment. Numerous firing points exist in this compartment as well, mainly concentrated to the grassy openings. Most of the compartment is under the 1935 long-term lease agreement L-1479 (Act 154 P.A. 1935) with the Michigan National Guard, Department of Military Affairs. The agreement provides for use by the military during their encampment, with no permanent buildings or improvements to be erected. Military needs take precedence over resource management needs on long-term lease lands. The DNR will coordinate all prescribed activities with the National Guard to ensure they are compatible with military training needs.

Unique Natural Features:

The Lovells Bog lies within this compartment and a management plan has been developed. This is a unique natural land form with many unique and in some cases rare plant species. The area is also used heavily by many species of wildlife. There is potential for dry grass prairie plants in grassy openings such as Hill's thistle, rough fescue, Alleghany plum, and pale agoseris. There is potential for dusted skipper, grizzled skipper, secretive locust, red legged spittlebug, Kirtland's Warbler, and prairie warbler in young jack pine stands. Possible raptors for the area include goshawk, bald eagle, and red shouldered hawk. Within riparian zones one may find blandings turtle, wood turtle, and common loon. False violet was found near this compartment.

Archeological, Historical, and Cultural Features:

The compartment has a great deal of military influence.

Special Management Designations or Considerations:

Military and the Lovell's Bog ERA

Watershed and Fisheries Considerations:

Some small water bodies, mostly bogs with open water existing in the center.

Wildlife Habitat Considerations:

This area is used heavily by many species of wildlife throughout the year. There is a great deal of aspen present in the area occupying multiple age classes and therefore a great deal of deer and grouse can be found. Turkey, fox and other small mammals were also observed while field work was being conducted. Numerous birds of prey were seen. Timber management prescriptions have taken these facts into account, along with the heavy use of this area for hunting.

Mineral Resource and Development Concerns and/or Restrictions

A former gravel pit is located in Section 22 and two recently active pits in Section 24. There is good potential for additional

sand and gravel on the upland areas within the compartment. None of the compartment is currently leased for oil and gas development and parcels are classified as non-leasable. The nearest production is from the Antrim Shale to the northeast. The compartment may be too far south for significant Antrim potential. There is no known metallic mineral potential in this part of the state.

Vehicle Access:

Vehicle access throughout this compartment is plentiful. There is a multitude of 2-tracks traveling throughout the area, along with many maintained roads traversing the sections. Due to military training, this area has restricted public access during active training periods. This area is traveled by recreational enthusiasts along with military personnel throughout the year.

Survey Needs:

Survey needs are minimal. Some areas where state land adjoins county ownership may need to be looked at, namely the isolated '40'.

Recreational Facilities and Opportunities:

This area is used heavily for recreational purposes, notably hunting, bird watching and snowmobiling. Summer recreational activities are limited due to summer training limiting public access to the area. No state-owned trails or facilities exist in this area except snowmobile trail no. 47 runs in the SE corner of section 24 just south of CR612.

Fire Protection:

Adequate access by roads provide ample opportunity for fire protection.

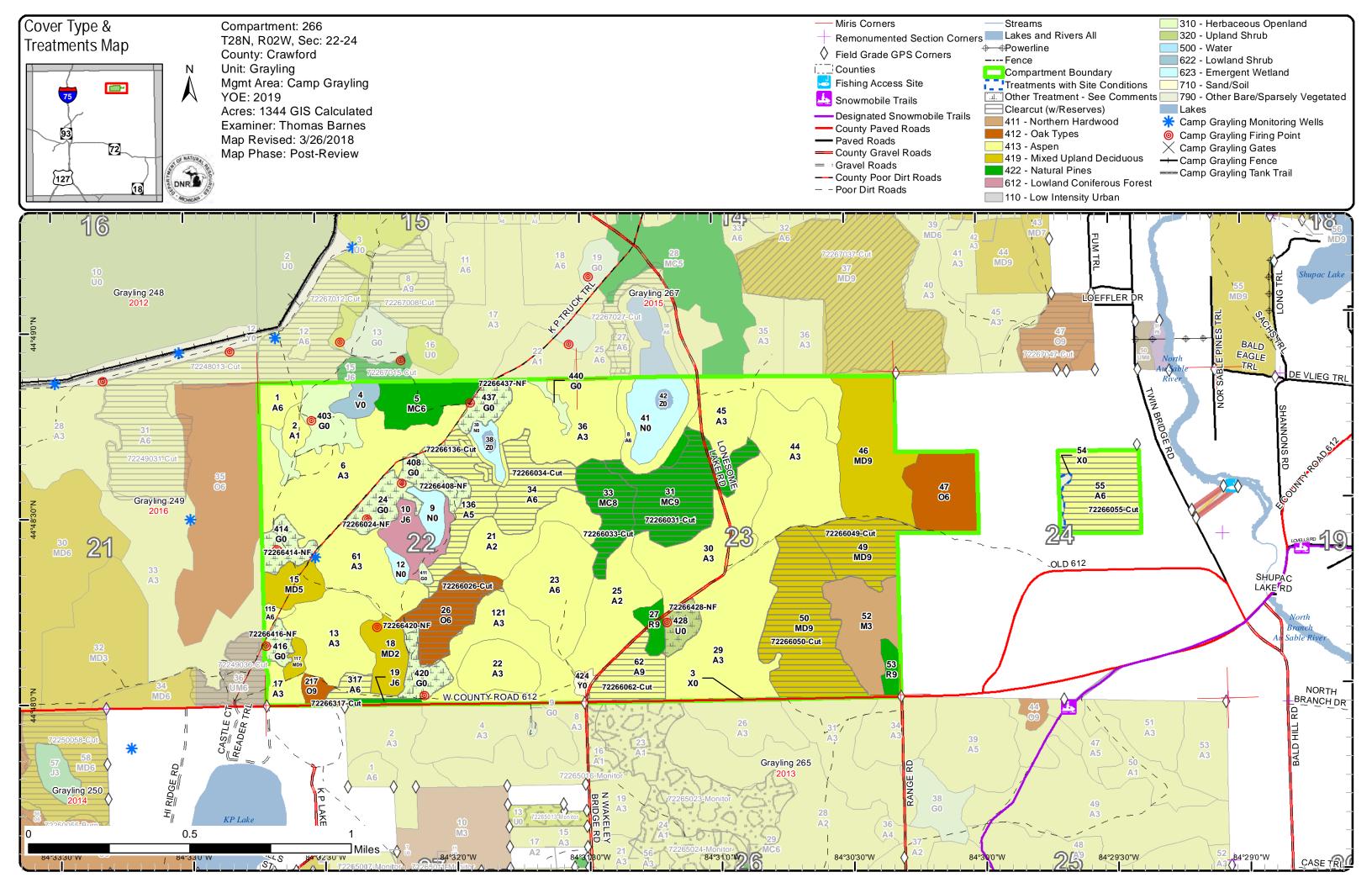
Additional Compartment Information:

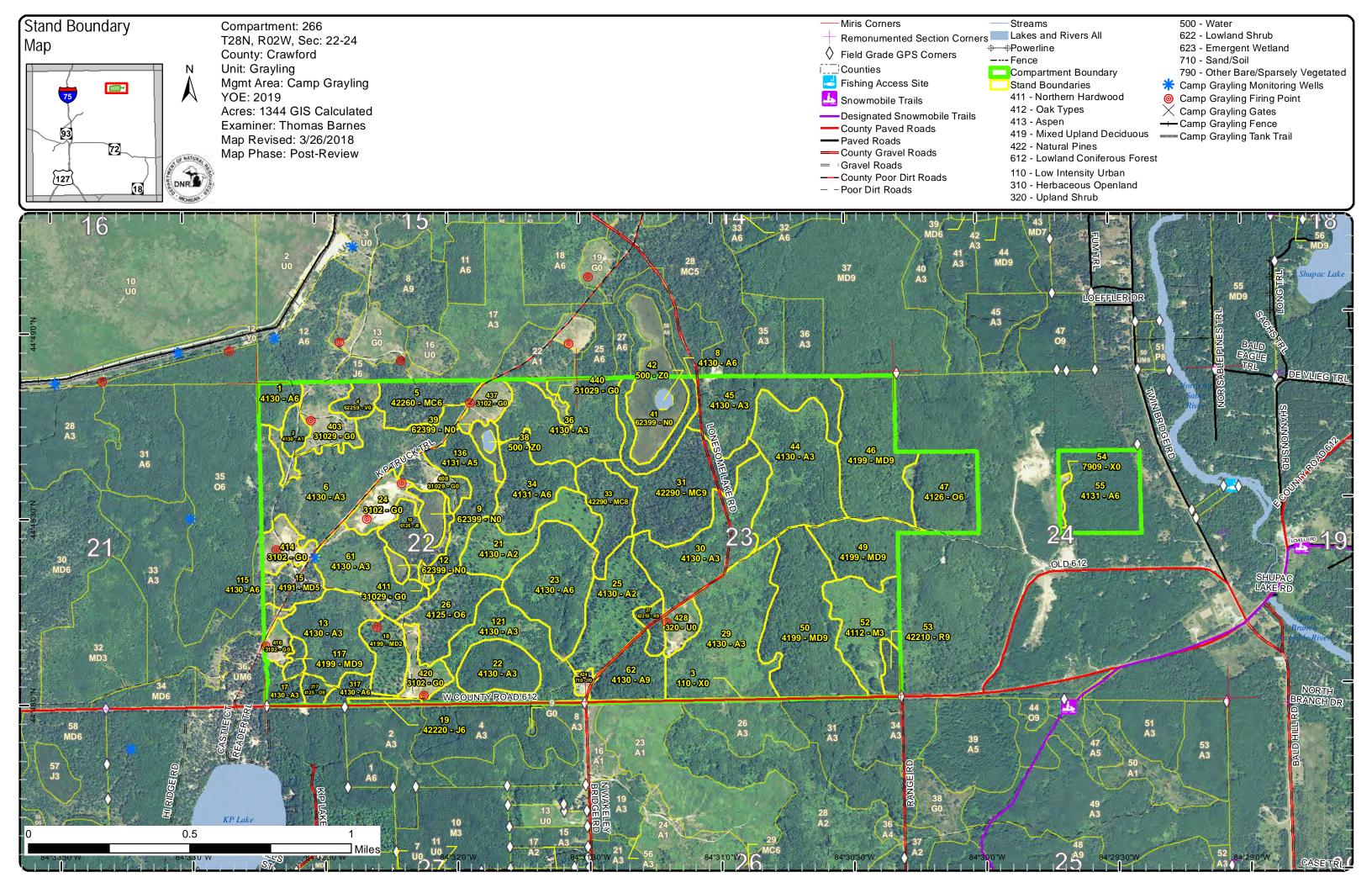
The following reports from the Inventory are attached:

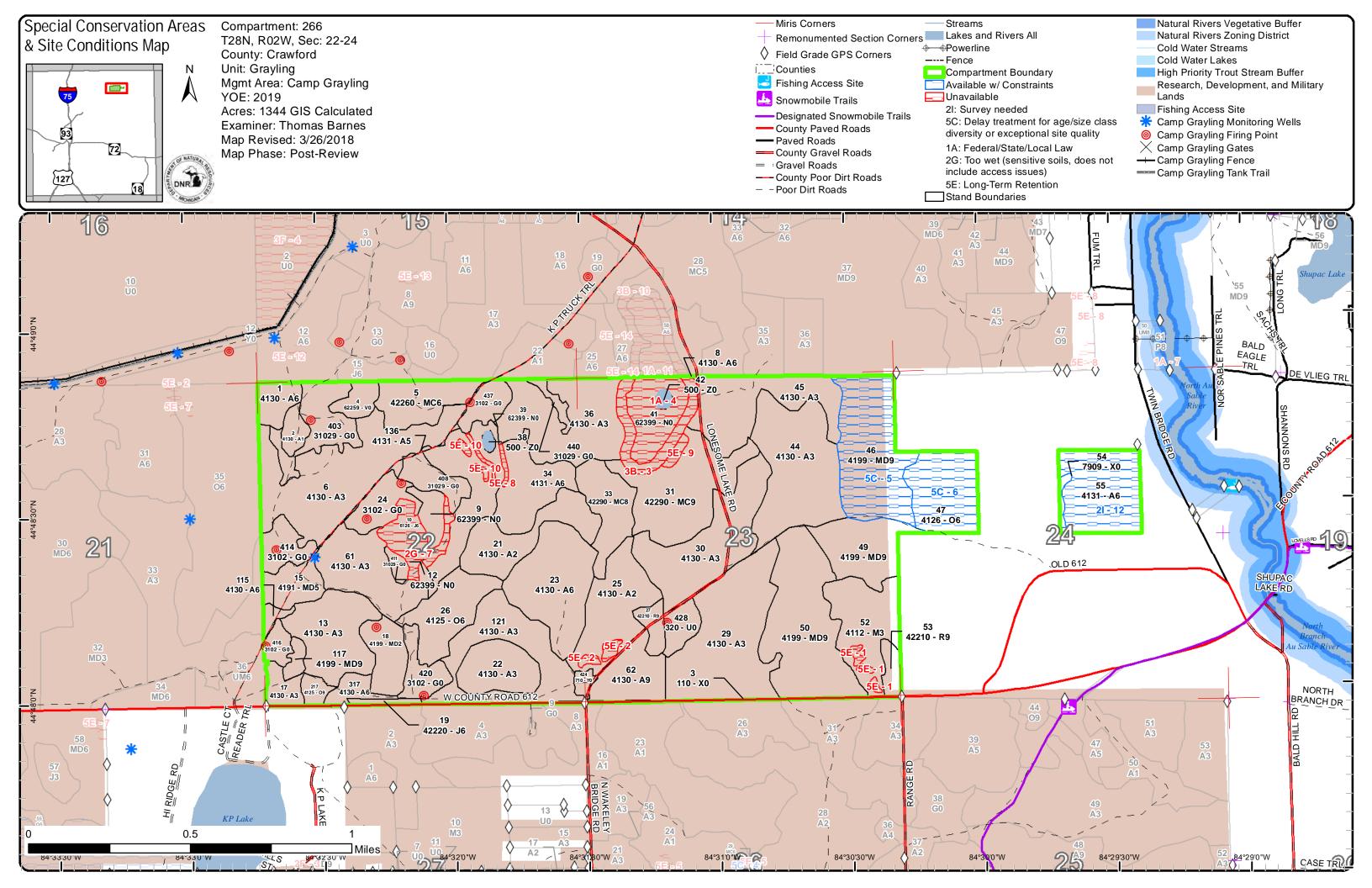
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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

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







Report 1 – Total Acres by Cover Type and Age Class

Grayling Mgt. Unit

Compartment 266 Year of Entry 2019

Thomas Barnes: Examiner



Age Class

	¥oc	L'OS C		27.Z	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	8 / 4	10 CO	, % /&		,	80.00	\$ /ø/	70,7	81, K	, S.	\$ K. 139	D. J.	St Jue	No. No.
Aspen	0	111	304	200	10	0	46	3	51	43	0	0	0	0	0	0	0	0	767
Bare/Sparsely Vegetated	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Bog	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Herbaceous Openland	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93
Jack Pine	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	19
Marsh	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Mixed Upland Deciduous	0	17	0	0	0	0	14	0	0	56	100	0	0	0	0	0	0	0	186
Natural Mixed Pines	0	0	0	0	0	0	0	0	97	0	0	0	0	0	0	0	0	0	97
Northern Hardwood	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
Oak	0	0	0	0	0	0	0	0	28	37	0	0	0	0	0	0	0	0	65
Red Pine	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	12
Sand, Soil	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Upland Shrub	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Water	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	160	164	304	200	10	0	60	3	207	136	100	0	0	0	0	0	0	0	1341



Report 2 – Treatment Summary

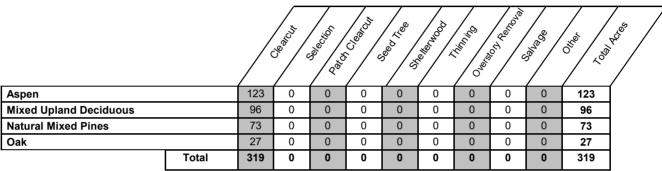
Grayling Mgt. Unit Year of Entry: 2019

Acres of Harvest

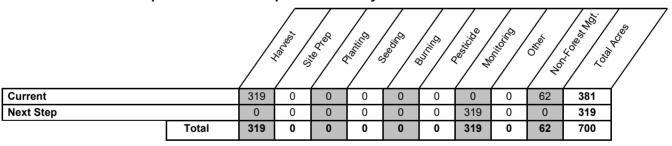
Compartment 266
Total Compartment Acres: 1,344

Commercial Harvest - 280 Harvests with Site Condition - 39 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Grayling S

Compartment: 266

Year of Entry: 2019

Deciduous

a n d	Treatment Name	Acres	Stand CoverType	Size Stand Density Age	I BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
24	72266024-NF	14.0	3102 - Grass	Nonstocked	Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary

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, and Specs: herbicide application. Also could include tree and shrub planting along the perimeter.

Next Step Treatments:

Acceptable Regen:

Other This opening is FP 212 and is part of the DNR/NWTF WHG project.

Comment:

Proposed Start Date: 10/01/2018

26 72266026-Cut 26.9 4125 - Black, N. Pin Poletimber 78 1-50 Harvest Clearcut 4199 - Other Even-Aged Field Boundary
Oak Well Mixed Upland

Habitat Cut: No Site Condition:

Prescription Final harvest without retention. No retention to try and maximize regen and forest health concerns. Include standard military, low stump and

Specs: chipping specs.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Fair to moderate stand of maple with some aspen and oak.

Regen:

Other Recommending an out of year entry as this sale is being heavily cut by illegal firewood cutters. Consider adding this to KP Trail Mix.Variance

<u>Comment:</u> approved to harvest out of YOE on 9-25-2017.

Proposed Start Date: 09/25/2017

31 72266031-Cut 49.7 42290 - Natural Sawtimber 77 81-110 Harvest Clearcut with 4311 - Pine, Even-Aged Draft Field Mixed Pine Well Retention Aspen Mix Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest with retention following standard retention guidelines. Leave multiple islands of retention. Include standard military, low stump and

Specs: chipping specs. Also included shrub spec.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable moderate stand of mixed conifer with aspen, oak and maple.

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

72266033-Cut 23.4 42290 - Natural Sawtimber 76 51-80 Clearcut with 4133 - Aspen, Draft Field Harvest Even-Aged Mixed Pine Medium Retention Mixed Pine Boundary

Habitat Cut: No Site Condition:

<u>Prescription</u> Final harvest with retention following standard retention guidelines. Leave multiple islands of retention. Include standard military, low stump and

Specs: chipping specs.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Accept a mixture of aspen, maple oak and mixed conifer meeting minimum stocking levels.

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Acceptable Moderate to well stocked stand of oak, maple and aspen with some pine.

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

72266055-Cut 39.2 4131 - Aspen, Oak Poletimber 111-Harvest Clearcut 413 - Aspen Even-Aged **Draft Field** Well 140 Boundary

Habitat Cut: No Site Condition: Survey Needed

Prescription Final harvest with no retention. Add all military specs and drumming log spec.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Meduim to well stocked stand of aspen, maple and oak is acceptable regeneration.

Regen:

Was decided at comp review that parcel is surplus and should be disposed. Other

Comment:

Proposed Start Date: 10/01/2018 **Proposed Start Date:** 10/01/2018

413 - Aspen 136 72266136-Cut 27.4 4131 - Aspen, Oak Poletimber 73 51-80 Harvest Clearcut with Even-Aged Draft Field Medium Retention Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest with retention following standard retention guidelines. Leave multiple islands of retention. Include standard military, low stump and Specs:

chipping specs. Also include shrub and drumming log spec.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Moderate to well stocked stand of aspen with mixed associated species.

Regen:

Other Comment:

Other Comment:

Proposed Start Date: 10/01/2018

317 72266317-Cut Draft Field 7 1 4130 - Aspen Poletimber 59 51-80 Harvest Clearcut 413 - Aspen Even-Aged Well Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest without retention Include standard military, low stump and chipping specs. Also include shrub and drumming log spec.

Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable Moderate to well stocked stand consisting of aspen and mixed associated species.

Regen:

Other Comment:

Proposed Start Date: 10/01/2018

11.6 31029 - Grass (OI) Nonstocked 72266408-NF NonForestMgt Other - Specify 310 -Draft Field Herbaceous Boundary

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, and Specs:

herbicide application. Also could include tree and shrub planting along the perimeter.

Next Step

Treatments:

Acceptable Regen:

Other This opening is FP 206 and is part of the DNR/NWTF WHG project.

Comment:

Proposed Start Date: 10/01/2018

Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing, and Specs: herbicide application. Also could include tree and shrub planting along the perimeter.

Next Step **Treatments:**

Acceptable Regen:

Other This opening is FP 213 and is part of the DNR/NWTF WHG project.

Comment:

Proposed Start Date: 10/01/2018

310 -Draft Field 420 72266420-NF 11.6 3102 - Grass Nonstocked Unspec NonForestMqt Other - Specify ified Herbaceous Boundary 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, and herbicide application. Also could include tree and shrub planting along the perimeter. Specs:

Next Step **Treatments:**

<u>Acceptable</u>

Regen: Other

This opening is FP 211 and is part of the DNR/NWTF WHG project.

Comment:

Proposed Start Date: 10/01/2018

8.7 320 - Upland Shrub Nonstocked Unspec NonForestMgt 310 -Draft Field 428 72266428-NF Other - Specify ified Herbaceous Boundary 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, and herbicide application. Also could include tree and shrub planting along the perimeter. Specs:

Next Step

Treatments:

<u>Acceptable</u> Regen:

This opening is FP 209 and is part of the DNR/NWTF WHG project. Other

Comment:

Proposed Start Date: 10/01/2018

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 266 Year of Entry: 2019 **Cover Type Treatment** Acres Stand Size Stand BA **Treatment Treatment** Age **Approval** Method Objective Density Status Name CoverType Age Range Type Structure 72266437-NF 10.0 Unspec NonForestMgt Other - Specify 310 -Draft Field 3102 - Grass Nonstocked

Herbaceous

Openland

Boundary

Habitat Cut: No Site Condition:

<u>Prescription</u> Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing, and <u>Specs:</u> herbicide application. Also could include tree and shrub planting along the perimeter.

ified

Next Step

s

t a

n

d

437

Treatments:

Acceptable Regen:

Other This opening is FP 215 and is part of the DNR/NWTF WHG project.

Comment:

Proposed Start Date: 10/01/2018

Total Treatment Acreage Proposed:

392.4

Grayling Mgt. Unit

Compartment: 266 Year of Entry: 2019 **Thomas Barnes: Examiner** Availability for Management

Availa	ability for	Managemer	It							
Total	Acres	Acres Avail	Acres		Domina	nt Site	Cond	ditions	S	
Acres	Available	With Condition	Not Available		21	5C	1A	2G	3B	5E
769	709	39	21	Aspen	39				14	7
2	2	0	0	Bare/Sparsely Vegetated						
7	7	0	0	Bog						
93	93	0	0	Herbaceous Openland						
19	3	0	17	Jack Pine				17		
38	16	0	22	Marsh			22			
186	131	56	0	Mixed Upland Deciduous		56				
97	95	0	2	Natural Mixed Pines						2
36	34	0	2	Northern Hardwood						2
65	32	33	0	Oak		33				
12	12	0	0	Red Pine						
3	3	0	0	Sand, Soil						
9	9	0	0	Upland Shrub						
5	5	0	0	Urban						
3	1	0	1	Water			1			
1,344	1,151	128	65	Total Forested Acres	39	88	23	17	14	11
	86%	10%	5%	Relative Percent		•	•	•		

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

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

Report 4 – Site Conditions

Grayling Mgt. Unit

Thomas Barnes : Examiner

Compartment: 266 Year of Entry: 2019

3	Unavailable	3B: Threatened, endangered, and special concern species	14	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Lovells Bog buffer	150 ft created as per the Lovells	s Bog EF	RA Plan.			
4	Unavailable	1A: Federal/State/Local Law	23	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Lovell's Bog ERA						
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	56	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	33	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	17	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Site is covered with	n leatherleaf and standing water	in many	vareas, I don't believe it w	ould be operational.		
8	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Compartment: 266

Grayling Mgt. Unit

Thomas Barnes : Examiner Year of Entry: 2019

9	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified		
С	comments:								
10	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified		
С	comments:								
12	Available	2I: Survey needed	39	Unspecified	Unspecified	Unspecified	Unspecified		
_	Comments:								
P	arcel is also surpl	us and up for disposal.							

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: 266
Year of Entry 2019



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 Area	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 for include the 5,847 acre Forest Fire Experiment Station, the 12,000 Area, the Beaver Islands Archipelago Wildlife Research Area (the High and Hog Islands, all state owned land on Beaver, South Fow Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research, and over 144,000 acres of Military Lands.	O acre Houghton Lake Wildlife Research at includes most of Garden Island, all of x and North Fox Islands), the Cusino
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high d communities are ecologically and socially significant in their effect as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, iversity of plants and wildlife. Riparian cts on water quality and quantity, as well
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from sp approved distance from the river centerlines. The Natural Rivers most Natural Rivers. The Vegetative Buffer ranges from 25 to 10 and Vegetative Buffers for each Natural River see the table locat folder.	Zoning District is a 400 foot buffer for 00 feet. To view specific Zoning Districts

S t	Graylin	g Mgt. Unit		Report 7	- Forested	Stands Compartment: 266 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4130 - Aspen	Poletimber Well	9.6	31	Immature	Aspen growing well with some oak, red maple and a few white pine mixed in. Good range of dbhs for aspen from sapling to small logs. Lot's of vehicle use throughout stand from military, ORV, etc. Wildlife activity is quite heavy and has resulted in heavy browse on select species. Stand is PArVHa/PArVVb
2	4130 - Aspen	Sapling Poor	6.1	18	1-50	Stand is PArVHa/PArVVb OPIC - FMD: THE STAND IS HEAVILY INFECTED WITH HYPOXYLON CANKER. NEED TO CUT. No retention due to small size per pre compt discussion - SJT.
5	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	22.2	77	81-110	Stand is PArVHa/PArVVbMixed stand of Red and jack pine with aspen pockets and aspen mixed in. Some areas are more heavy to jack pine with small pockets of aspen present. Cherry and oak in understory. More red pine is East with some scattered throughout jack pine in remainder of stand. Aspen is a significant component.
6	4130 - Aspen	Sapling Well	73.9	18	Immature	Stand harvested 2000. Nice young aspen stand with oak and maple mixed in some pine is present as well. Lot's of wildlife activity. Nice edge forming around stand with some open areas developing where aspen did not take. Also some areas of hawthron around outer edge providing good protective cover to wildlife. Stand is PArVHa/PArVVbOPIC - FMD: A# stand with some oak and red maple mixed in. White pine is also present in somewhat low numbers. (old comment) FINAL HARVEST. WINTER CUT ONLY.
8	4130 - Aspen	Poletimber Well	14.1	85	81-110	As per the Lovell's Bog ERA Plan, This stand was created as a 150 RMZ for the bog.
						Young aspen stand with mixed associated species. Maple and hawthorne understory. Some residual pine from adjacent stands.
10	6126 - Lowland Jack Pine	Poletimber Well	16.6	77	111-140	Jack pine stand with descent stocking. Wet in understory with leatherleaf being the main component on the ground. Some windthrow along north and east edge. Some standing water in understory/low spots. Short overall height in JP, increases in north. Some large RP throughout and along edges.
13	4130 - Aspen	Sapling Well	37.1	28	Immature	Aspen stand with some oak and red maple mixed in. Some aspen along the outside edge of stand have reached merchantable size, however the bulk of the stand is still around 4"DBH. Hawthorn is also present in this stand in relatively high numbers considering the shade that is cast.
15	4191 - Mixed Upland Deciduous with Conifer	Poletimber Medium	14.0	51	1-50	Open grown stand with overall low stocking. Oak saps throughout, 5-10' in height. Diverse dbh's as a result of open grownness. Pockets of thick aspen regen as well as scattered conifer regen. Lot's of standing snags and DWD. Hold stand for another 10 years. Stand is overall pole size but does have both log and saplings within, dbh's wil reflect. Understory is a mixture of oak, maple, cherry aspen and other associated species.

s t	Grayling	Mgt. Unit		Report 7	Forested	Stands Compartment: 266 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	4130 - Aspen	Sapling Well	7.8	6	Immature	Stand harvested in Winter 2011-12 under contract 72-623-09-01 KP & 612 Mix. Good aspen regen throughout with some oak and maple. Heavy browse on oak and maple. Good wildlife signs. Three BA swings were taken with a stand average of 36, might be a little high as one plot landed in retention island.
						Oak dbh is reflective of the residual left, majority is sapling size.
18	4199 - Other Mixed Upland Deciduous	Sapling Medium	16.5	6	1-50	Regen is being browsed, comprised of oak, maple, aspen and cherry. Most of the regen is less then 4ft tall. featuring residuals. Stand was harvested under contract 72-623-09-01 KP & 612 Mix. Scattered oak was left as residual retention of approximately 20BA. Stand passed regen survey.
19	42220 - Natural Jack Pine	Poletimber Well	2.7	77	141-170	Jack pine buffer along CR 612. Good oak in understory with some balsam fir and white pine scattered throughout. Grassy ground cover with some sweet fern and blueberry.
21	4130 - Aspen	Sapling Medium	30.3	6	Immature	Young stand regenerating well with aspen, maple and oak. Maple and oak stump sprouting. Roughly 15BA was left. Stand was harvested 2011-12 Winter under contract 72-023-09-01 KP & 612 Mix. 15 sqft of residual left. Stand passes natural regen survey.
22	4130 - Aspen	Sapling Well	22.5	28	Immature	Aspen stand, lot's of red maple. Fair amount of oak saplings, all of stump sprout origin. Overall-good quality stand with dense regeneration. Stand was cut in 1990.
23	4130 - Aspen	Poletimber Well	47.0	28	Immature	Aspen stand, small pole stand. Not developing into great quality. Scattered oak and white pine throughout with maple. Stand was cut in 1990. Some scattered openings.
25	4130 - Aspen	Sapling Medium	38.2	6	Immature	Stand harvested Winter 2011-12 under contract 72-623-09-01 KP & 612 Mix. 15sq ft of residual left. Rention was left as islands an individual trees of oak and scattered red pine. Stand regenerating well to aspen with maple and oak.
26	4125 - Black, N. Pin Oak	Poletimber Well	27.8	78	1-50	Understory is heavy to red maple, mainly of stump sprout origin. Heavy deer browse on red maple. Not much oak regen via acorn seeding, however there is some. Lot's of wildlife activity throughout stand. There isheavy natural mortality occurring in this stand. Extreme illegal firewood cutting an excess of 100 cut stumps. LED has been informed on this site. Stand thinned summer 2000, sale number 7201499-0
27	42210 - Natural Red Pine	Sawtimber Well	6.6	78	81-110	Stand thinned under contract 72-623-09-01 KP & 612 Mix in Winter 2011-12. Good looking red pine stand with a stand average of 90 BA. Understory is maple and oak with some other mixed shrubs. Treat stand in 10 years.
29	4130 - Aspen	Sapling Well	69.7	18	Immature	Stand was harvested in 2000. Hawthorne a long road and scattered within the stand. Good regen with some areas of Sparness. OPIC - FMD: A3/M3/O3 mixture. A3 overall. Some openings. Lot's of hawthorn thickets and a great deal of wildlife activity. (old comment) FINAL HARVEST. CUT IN WINTER. Stand harvested 2000 sale # 7202099-01.

s t	Grayling	g Mgt. Unit		Report 7	Forested	Stands Compartment: 266 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
30	4130 - Aspen	Sapling Well	51.8	28	Immature	Stand was harvested in 1990. Mixture of associated Species. DBH ranges from 2" to 5" with majority in the sapling stage. Majority of aspen is quaking. Pretty good stem density through it the Stand. OPIC - FMD: A3, developing well. Areas are borderline A6, although quite small DBH. Lot's of hawthorn with oak spas and some white pine, scattered. Thick with some openings. (old comment) STAND WAS FINAL HARVEST 1990
31	42290 - Natural Mixed Pine	Sawtimber Well	51.9	77	81-110	Quite a mixed stand. Some areas are jack pine dominated while others are dominated by red pine. Most areas have relatively low stocking with some patches of jack pine. Stand types to be a red pine stand. Descent red pine in areas, however limby because of open growing conditions. Some mixed oak regen-10-12' tall. Aspen and jack pine are declining. Lots of open areas/low stocking. Many of these areas are filled in often by hawthorn, cherry, etc. Heavier to jack pine in north as well as east of bog. Four BA swings were taken with stand average of 93.
33	42290 - Natural Mixed Pine	Sawtimber Medium	23.4	76	51-80	Stand comprising of open grown re and jack pine as well as aspen. Somewhat of a saddle type with pine on sides and aspen in valley. there are some openings. Low stocking and poor quality. Lot's of wildlife activity throughout. Great deal of cherry, hawthorn and other shrubby species present, especially in open areas. Some aspen and oak throughout, including some advanced oak regeneration, albeit relatively low quality.
34	4131 - Aspen, Oak	Poletimber Well	28.9	83	51-80	Overall a mixture of aspen, oak, red maple. Poor quality overall. Oak in understory has been browsed heavily, while some has made it to the sapling layer. White pine in understory in some places. Scattered red pine and jack pine.
36	4130 - Aspen	Sapling Well	52.3	18	Immature	Aspen stand with some oak, red maple, beech, and white pine scattered throughout. Growing well and responding nicely to treatment. Stand harvested 2000.
44	4130 - Aspen	Sapling Well	60.2	18	Immature	Stand harvested 2000 under sale # 7201999-01. Young aspen stand regenerating well. Good mixture of species. OIPC - FMD: Growing well, some open spots scattered around stand. Occasional oak saps with some browse damage, heavy in areas. Little bluestem present in small clumps. (old comment) FINAL HARVEST. Stand harvested 2000 under sale # 7201999-01.
45	4130 - Aspen	Sapling Well	42.0	28	Immature	Stand harvested i 1990 and r doing well with good reyen and a mixtn of species. Some conifer regen but not enough to be recorded. stems along road larger diameter. OPIC - FMD: A3 stand, almost identical in composition to stand 44. Some white and jack pine throughout. (old comment) STAND WAS FINAL HARVEST 1990
46	4199 - Other Mixed Upland Deciduous	Sawtimber Well	55.5	84	111-140	Descent quality oak. Birch is scattered throughout with areas where composition is made up of northern hardwood species including sugar maple. Not much for understory component. Kotar information types this stand in the upper nutrient/moisture regimes in terms of quality. Variable the further north you go with some good/some porr quality. Scattered red pine mostly in north portions of stand. Five BA swings were taken with a stand average of 127.

s t	Grayling	g Mgt. Unit		Report 7	– Forested	Stands Compartment: 266 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
47	4126 - White, Black, N. Pin Oak	Poletimber Well	32.8	83	111-140	Stand is primarily pole sized oak with more of a white oak component in the northern portion of the stand. There are some log sized stems but not enough to push the classification to a log sized stand. Growth looks good. Four BA swings were taking with the stand average of 138, again majority is oak. This stand has a little more BA than stand 46 but smaller in size and not the northern hardwood component. An understory is not really present. There is evidence of past illegal firewood cutting.
49	4199 - Other Mixed Upland Deciduous	Sawtimber Well	29.5	98	81-110	Variable stand with some open areas. Fair quality oak, not much in terms of understory. Some aspen pockets, lot's of standing dead birch providing good cover and nest areas. Three BA swings taken with average BA for oak was 60, maple 23, aspen 17 and pine 7 for a stand average of 107.
50	4199 - Other Mixed Upland Deciduous	Sawtimber Well	66.6	98	81-110	Oak and aspen of descent quality, red pine is fair. Red pine component is scattered throughout stand. Oak is thick in spots in understory, however browsed quite heavily. Five BA swings were taken with stand average of 98.
52	4112 - Maple, Beech, Cherry Association	Sapling Well	36.0	6	Immature	Stand was harvested in 2012. Red Pine an aspen were 6" and up, everything else was cut. Regen is mix of red maple and oak clump sprouts. Heavy deer browse.OPIC - FMD: More red pine than stand to the north. Open pockets with some low quality/low stocking in areas. Aspen that is left is decling. Some areas quite a bit more open, especially along the eastern edge of the stand. In these areas, the M3/A3 understory is thick and growing well, mostly of stump sprout origin. Aspen and red maple were removed during last harvest and red oak/red pine were left. What remains is a lightly stocked O9 stand with an M3/A2 understory and scattered red pine, more dens in the southern and western portions of the stand. Not much oak regen in response to removal, lot's of browse. In the process of converting to an M6 stand with overstory oak. More aspen in south along CR 612. (no old comment) Per widlife, would like to final harvest with islands of oak for retention. Need NG approval and compt review approval on this updated prescription as of Sept 2007- SJT- treat with adj stand 53. Per CR- approved as a final harvest with reserves. Leave islands of oak and pine for visual mgt and retention. Obtaining a mixed stand of natural regeneration is acceptable. Pay attention to visual impact or management along CR-612. Post-harvest update: was cut in summer 2012 (72-632-09-01) Stonehenge Oak & RP, by T. R. Timber, merch & up except 6" & up on the aspen & RP. Mature oak retention islands were left. Operational paths were allowed to be cut through the dense aspen & RM regen. Previous year of origin (on the oak) was 1930.
53	42210 - Natural Red Pine	Sawtimber Well	5.7	77	81-110	Very good quality R9 and great site for red pine. A few small localized areas of pocky damage, mainly on suppressed and smaller diameter red pine within stand. Small amounts of natural regen has dropped in adjacent stand to the east. Stand tapers into adjacent stand to the north and west with some residual red pine being found quite a ways into these stands. Stand was thinned in summer 2012 (72-632-09-01) Stonehenge Oak & RP, by T. R. Timber, orange-marked trees and all oak, aspen. Stated cruised residual of 80 sq. ft. RP.

S t	Grayling	Mgt. Unit		Report 7 – Forested		Stands Compartment: 266 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
55	4131 - Aspen, Oak	Poletimber Well	39.2	51	111-140	Aspen oak stand, where there are areas where each species is dominant. There are som open areas as well. Understory is browsed mostly maple and oak in understory. There are some deep valleys running thru this parcel. This forty is landlocked with access only thru Crawford Country Road Commission gravel pit which is locked by gate. Have checked with Road Commission regarding land exchange and they were not
61	4130 - Aspen	Sapling Well	34.4	6	Immature	Young aspen stand that is coming in great, good stem densitites. Stand harvested under contract 72-623-09-01 KP & 612 Mix in the Winter of 2011-12. Stand passes natural regen survey.
62	4130 - Aspen	Sawtimber Well	21.4	71	51-80	Mature aspen stand with a mixture of oak, maple and red pine. Understory is made up of maple, oak and deciduous shrubs. Aspen is starting to die. Stand needs to be harvested. This stand was split off from Stand 25 which was harvested in 2012.
115	4130 - Aspen	Poletimber Well	2.9	62	51-80	Fair quality aspen stand with red pine mixed in. Stand is starting to show some mortality. Cherry in understory with red pine and jack pine as well. Some oak saplings 5-8' tall with some larger individuals scattered throughout, approximately 10 BA.
117	4199 - Other Mixed Upland Deciduous	Sawtimber Well	3.9	92	51-80	Small stand with good species diversity. Three BA swings were taken with stand average of 56. good wildlife stand. Sweetfern at edges. Good oak regener in places, albeit poor quality. Open stand with overall low stocking. Overall, relatively poor quality. Leave stand for structural diversity and wildlife mast production.
121	4130 - Aspen	Sapling Well	42.2	18	Immature	Stand final harvested winter 1999-2000 sale number 7201499-01. Good stem density and species mix. OPIC - FMD: A3 stand, responding well to final harvest with dense regen and good quality overall. Scattered oak and pine. Stand also has a significant red maple component throughout with areas heavier to red maple than to aspen. (old comment) THERE ARE A FEW POCKETS OF HEALTHY ASPEN. MOST ARE SHOWING SIGNS OF DECAY (CONKS, HYPOXYLON CANKER. GREAT SITE FOR ASPEN. TREAT WHEN STD 26 IS CUT. WINTER CUT. Stand final harvested winter 1999-2000 sale number 7201499-01.
136	4131 - Aspen, Oak	Poletimber Medium	30.2	73	51-80	Stand is primarily poor quality aspen with oak. stand needs treated. Quality is greatly reduced as you come down the hillside from stand 21. Lot's of open areas, with great variability overall. More of a pure aspen stand with oak understory in the northern portions of the stand, west of the bog/marsh.
217	4125 - Black, N. Pin Oak	Sawtimber Well	4.4	80	51-80	Small stand with different species composition/makeup. Aspen is descent with overall fair quality. Oak is okay with some good quality individual trees/areas. Somewhat low stocking in areas, however higher BA than stand 117. White pine in understory with major red maple component. Three BA swings were taken with stand average of 67. Leave for structure and wildlife.
317	4130 - Aspen	Poletimber Well	7.1	59	51-80	Aspen stand descent stocking and moderate quality, however, starting to see some mortality. Oak/White pine in understory along with cherry. Lot's of standing snags, hawthorn thickets at edges.

Compartment: 266 Year of Entry: 2019



Stand	Cover Type	Acres	Managed Site	General Comments:
3	110 - Low Intensity Urban	4.5	No	County Rd 612
4	62259 - Bog (OI)	7.4	No	Kotar classification is an Unclassified Lowland.
				OPIC - FMD: Small bog surrounded by jack pine, low stocking. Lot's of winter wildlife activity on and around bog area. (no old comment)
9	62399 - Marsh (OI)	7.8	No	Marsh/bog with some small j pine throughout. Lots of water in stand with leatherleaf being the main component on the ground.
12	62399 - Marsh (OI)	3.0	No	Small marsh/bog area. Lot's of wildlife activity in and around stand. Surrounded by jack pine and aspen stands. Hawthorn around edges where soil begins to dry out.
24	3102 - Grass	14.0	No	Firing point 206
				OPIC - FMD: Large grassy opening. Firing point 206 is within this opening. There is some jack pine present in this opening. Interesting feature, some bog in the understory of this jack pine, most likely a drainage from adjacent bog to the south, or an inlet of some groundwater. Lot's of wheeled vehicle activity present throughout opening. (no old comment)
38	500 - Water	1.3	No	Open water. Lot's of wildlife activity around stand. Leatherleaf grows up to water's edge with some inlets coming into bog area from water. Some scattered jack pine and tamarack around perimeter of water.
39	62399 - Marsh (OI)	5.4	No	Marsh surrounding open water. Leatherleaf with some scattered JP and swamp conifers.
41	62399 - Marsh (OI)	21.7	Yes	Lovells Bog ERA. Marsh/bog surrounding open water. Made up mostly of leatherleaf with a few swamp conifers present at edges along with some jack pine on bog and at edges.
42	500 - Water	1.4	No	Open water. Leatherleaf at edges along with some swamp conifers nearby.
54	7909 - Nonstocked (OI)	1.7	No	Open area, old gravel activity. Pits dug into hillsides. There are also numerous dump piles of metal, concrete, etc. GRAVEL PIT - GATED Per CR- pursue exchange of this 40 acres with the Crawford County Road Commission.
403	31029 - Grass (OI)	23.1	No	Grassy opening. Some residual tree species including white pine, red maple, cherry species, and aspen. Hawthorn at edges of stand. Lot's of wheeled motor vehicle use. Open sand spots in many locations of opening.
408	31029 - Grass (OI)	11.6	No	Large grassy opening. Firing point 206 is within this opening. There is some jack pine present in this opening. Interesting feature, some bog in the understory of this jack pine, most likely a drainage from adjacent bog to the south, or an inlet of some groundwater. Lot's of wheeled vehicle activity present throughout opening.

Compartment: 266 Year of Entry: 2019



		Acres	Site	General Comments:
411	31029 - Grass (OI)	1.4	No	Small grassy opening with some residual tree species from adjacent stands scattered throughout. Some hawthorn at edges providing cover for what looked to be small game species along with a few game birds.
414	3102 - Grass	11.8	No	Firing point 203
				OPIC - FMD: Grassy opening with some residual tree species present. Patches of J5/J6. Large white pine on west side of road, no regen nearby. Firing points on both sides of main road. FP203 on west side of road, FP212 on east side. Scattered aspen/oak, poor quality. (no old comment)
416	3102 - Grass	5.7	No	This is firing point 213.
				OPIC - FMD: Grassy opening with some trees present. Some large red pine preseant at eastern edge of stand. Firing point 213 is within this stand. (no old comment)
420	3102 - Grass	11.8	No	Military firing point and Air Medevac Zone
				OPIC - FMD: Grassy opening with scattered clumps of oak regeneration approximately 2-3" DBH. Mixture of grasses/sweetfern and vlueberry. Minimal knapweed with some small patches quite thick. AirMedavac Landing Zone-DELTA is located on this site. (no old comment)
424	710 - Sand, Soil	2.8	No	Sandy/grassy opening.
				OPIC - FMD: Grassy opening, confluence of many forest roads. Often used to park semi trailers/log trucks when working on adjacent state land. (no old comment)
428	320 - Upland Shrub	8.7	Yes	This is firing point 209. Site has some aspen seedlings sprouting up.
				OPIC - FMD: Grassy opening with clumps of A3/M3/O3. Scattered red pine within stand. Firing point 209 within stand.
437	3102 - Grass	10.0	No	Firing point 215.OPIC - FMD: Firing point 215 is within stand. Grassy opening with lots of knapweed throughout. (no old comment)
440	31029 - Grass (OI)	3.4	No	Grassy opening at northern edge of compartment. Extends into compartment to the north as well. Lot's of vehicle activity throughout stand.