

GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 265 ENTRY YEAR: 2013

GIS Compartment Acreage: 1,729

County: Crawford County

Revision Date: September 2, 2011

Stand Examiner: Patrick A. Mohney

Legal Description: T28N, R02W, Sections 25, 26 and 27

Management 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.

Soils and Topography: Soils are mainly Graycalm sand with some Klacking sand on the east side of the compartment. The terrain is gently rolling throughout most of the compartment. There are several steeper slopes near KP Lake.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The majority of the compartment is state ownership leased to the Department of Military Affairs for training purposes under L-1479 or is owned by the Department of Military Affairs. There are several private inholdings within the compartment. Some are being used as year round residences and others are being used seasonally.

Unique, Natural Features (include only non-site specific and non-sensitive information): High-quality bog, dry northern forest, northern fen and rich conifer swamp to S, pine barrens and intermittent wetland are found to the west and poor fen is located to the north. Rough fescue is found in the SW 1/4 of section 17, and Hill's thistle and Alleghany plum are in the vicinity. There is potential for dusted skipper, grizzled skipper, red-legged spittlebug, Henry's elfin, secretive locust, blazing star borer, pale agoseris, and Alleghany plum in barrens in the compartment. There is potential for red-shouldered hawk, goshawk, Kirtland's warbler, Blanding's turtle, and massasauga in the compartment. There is some potential for false violet and fleshy stichwort in hummocky pine or aspen stands.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): There are occurrences of Archaeological and Historical significance in the compartment.

Special Management Designations or Considerations:

The KP Lake Owners Association is located on the west side of the Compartment. Many year round residences and seasonal residences surround this lake.

Watershed and Fisheries Considerations: The east shore of KP Lake lies within the compartment and is privately owned.

Wildlife Habitat Considerations: Manage for forest health, productivity, sustainability, species diversity and structural diversity. Continue treatments to maintain habitat. Important wildlife species are deer, turkey and grouse.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of ice-contact outwash sand and gravel. The glacial drift thickness varies between 400 and 800 feet. Beneath the glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. The nearest gravel pit is located in the northwest of Section 27 and potential appears to be good. This is part of the State Military lease land. One Guelph (Niagaran) reef well was drilled in Section 26, and is the only well drilled in the township. There are no current leases in this compartment. The closest production is the Antrim Shale gas play three miles to the northeast.

Vehicle Access: This compartment has excellent vehicle access. There are forest trail roads, recreational trails and the following county roads: Wakely Bridge, KP Lake Rd, Co Rd 612, Fruit Farm Rd, and Range Rd. Some of the county roads are seasonal due to military training restrictions.

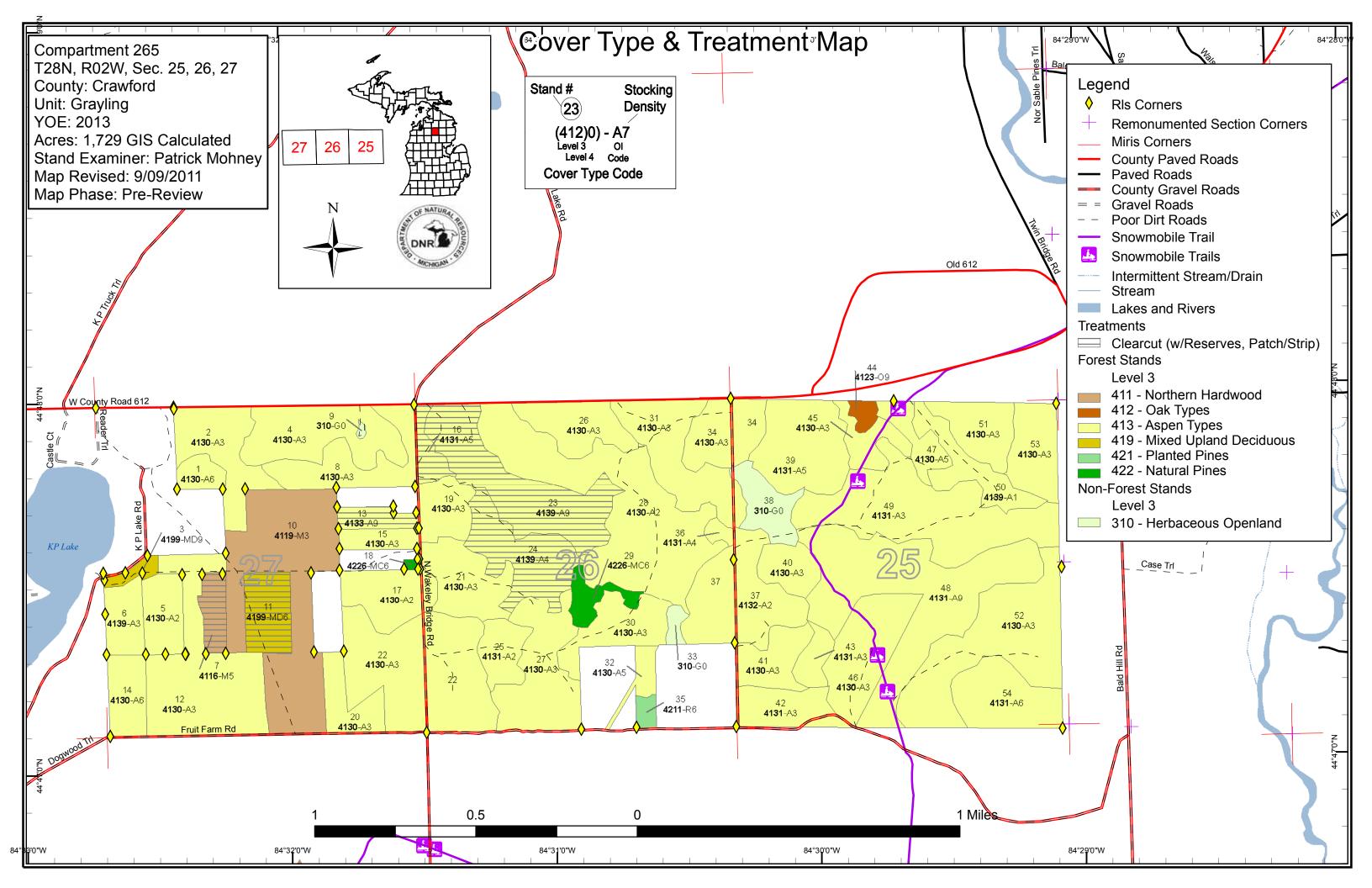
Survey Needs: The potential for future surveys exists.

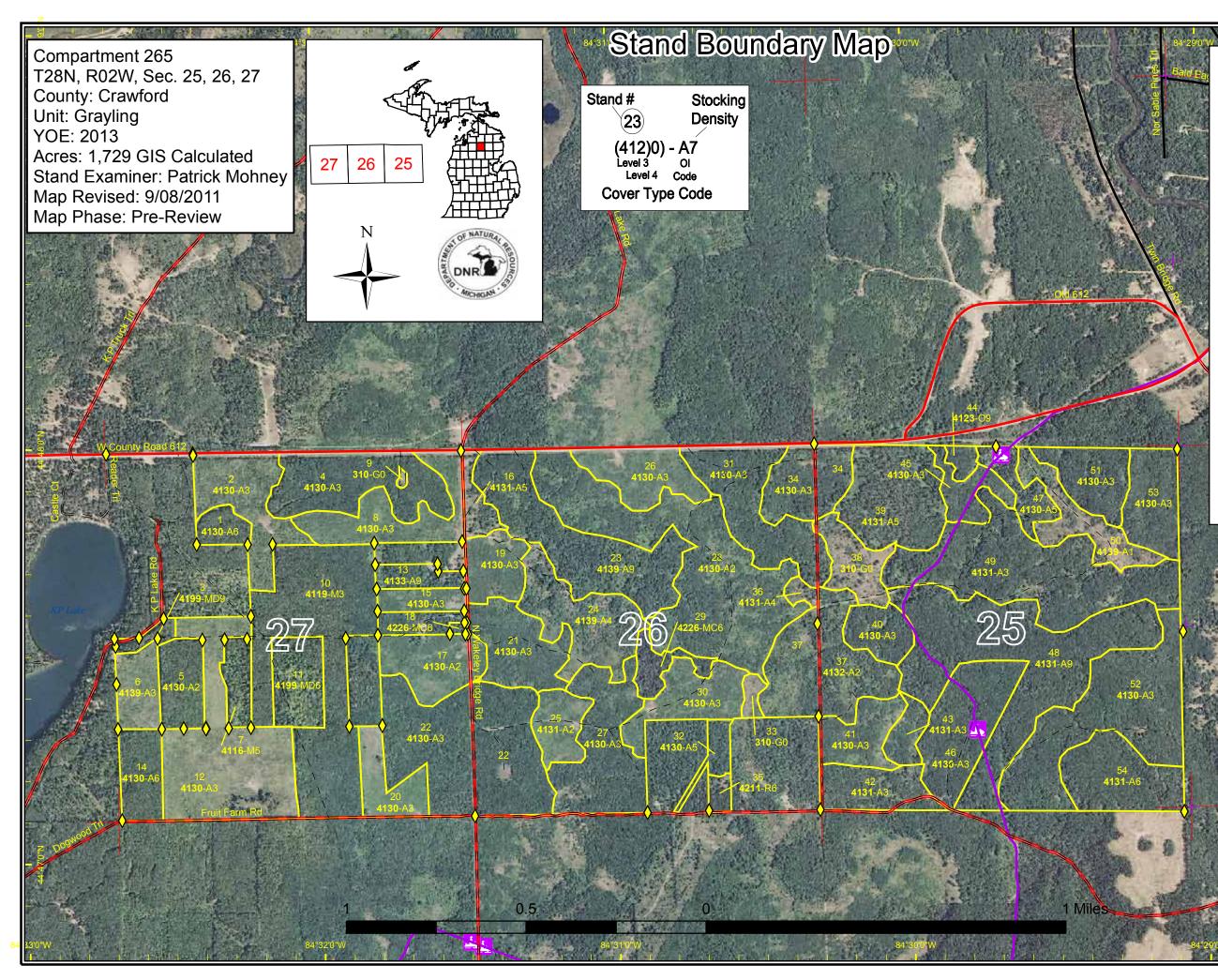
Recreational Facilities and Opportunities: The Grayling-Lovells Snowmobile Trail #47 traverses through east part of the compartment. The area receives heavy hunting pressures, especially during grouse hunting season. There is a public access site on KP Lake, just to the west of the compartment.

Fire Protection: The entire compartment consists of upland hardwoods and has rolling terrain. Access for fire suppression is good. There is access for a water source to KP Lake at the Public Access Site.

Additional Compartment Information:

- > The following reports are available:
 - Total Acres by Cover Type and Age Class
 - Proposed Treatment Summaries
 - Dedicated Conservation Area Details
 - Listing of Forested Stands
 - Listing of Non-Forested Stands
 - Proposed Treatments with No Limiting Factor
 - Proposed Treatments with Limiting Factors
- > The following information is displayed, where pertinent, on the attached compartment maps:
 - Base feature information, stand numbers, cover types, recreation trails and facilities
 - Proposed treatments
 - Dedicated & Proposed Special Conservation Areas





Legend

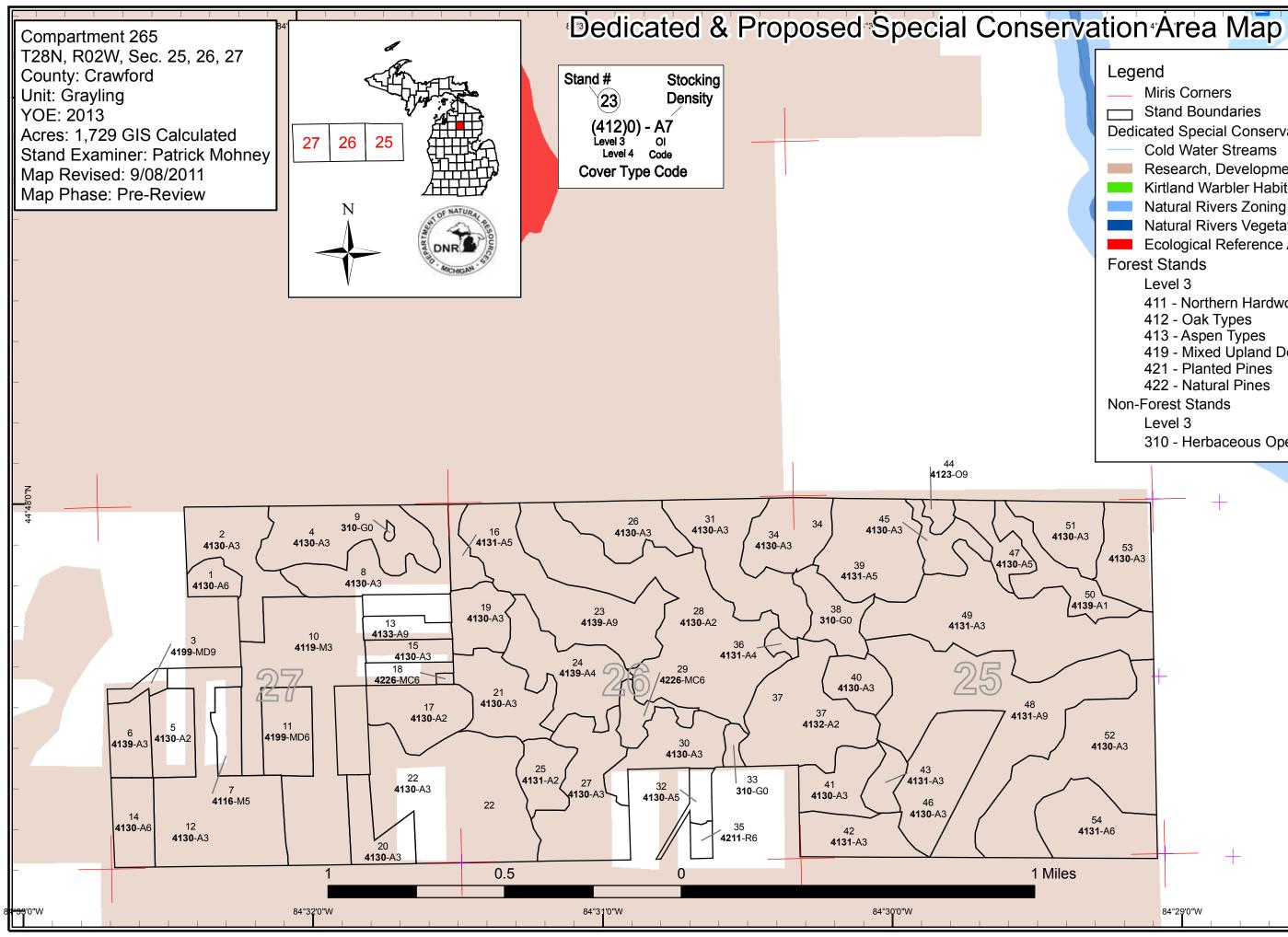
 \diamond **RIs Corners**

- Remonumented Section Corners
- Miris Corners
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads = =
- Poor Dirt Roads _ _
- +Remonumented Section Corners
- Snowmobile Trail
- 4 Snowmobile Trails
- Stand Boundaries

Forest Stands

- Level 3
- 411 Northern Hardwood
- 412 Oak Types
- 413 Aspen Types 419 Mixed Upland Deciduous
- 421 Planted Pines
- 422 Natural Pines
- Non-Forest Stands
 - Level 3
 - 310 Herbaceous Openland





ation₄	Área Map	84°28 <u>'0</u> 'W
S Dedica C C R R K N R K N R K R K N R K R K R K R K R K R K R R K R R K R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R R	d liris Corners tand Boundaries ted Special Conservation Areas old Water Streams esearch, Development, and Military Lands irtland Warbler Habitat atural Rivers Zoning District atural Rivers Vegetative Buffer cological Reference Areas Stands evel 3 11 - Northern Hardwood 12 - Oak Types 13 - Aspen Types 19 - Mixed Upland Deciduous 21 - Planted Pines 22 - Natural Pines prest Stands evel 3	44°490"N
3 4130-A3 50 19-A1 52 4130-A3 54 131-A6	10 - Herbaceous Openland	4°480"N
	84°29'0"W	- 44°47'0"N

Table 1 – Total Acres by Cover Type and Age Class

Grayling Mgt. Unit patrick mohney : Examiner

Compartment 265 Year of Entry 2013



							Age	Class									
	Hor	A street of the	0:2	0 ^{.70}	D ²		40.42	^{SR}	69'. 69	10,10	499 499 499	6.6	601.001	611.011	20× 150	AND A	100
Aspen	0	430	292	514	66	0	176	66	0	0	0	0	0	0	0	1544]
Herbaceous Openland	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24]
Mixed Upland Deciduous	0	0	0	0	0	0	0	28	0	0	0	0	0	0	0	28	
Natural Mixed Pines	0	0	0	0	0	0	1	11	0	0	0	0	0	0	0	12	
Northern Hardwood	0	0	101	0	0	12	0	0	0	0	0	0	0	0	0	113]
Oak	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4]
Red Pine	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4]
Total	24	430	394	514	66	12	177	108	4	0	0	0	0	0	0	1729]



Table 2 – Proposed Treatment Summaries

MICHIGAN .	Grayling Mgt. Unit Year of Entry 2013											Compartment Total Compartment Acres:	
					Acre	s by 1	reatm	ent Ty	pe				
	Commercial Harvest - 161	Site F	Prep - 0		Т	ree P	lanting	- 0		Pres	cribed Burn - 0	Other - 0	
	Habitat Cut - 0	Open	ing Maintenar	nce - C) Т	ree S	eeding	- 0		Pest	icide - 0		
					Cov	ver Ty	pe by ł	Harves	st Meth	nod			
						in and in the second	0000110000	and the second s	/		Poles Andrew Poles		
	Aspen			126	0	0	0	0	0	126			
	Mixed U	pland De	ciduous	23	0	0	0	0	0	23			
	Northern	n Hardwo	od	12	0	0	0	0	0	12			
			Total	161	0	0	0	0	0	161			

6		Gray	/ling Mgt. Unit			atments Pres _imiting Facto		Compartment: 265 Year of Entry 2013	NOF NATURAL PRIME
t a									DNR DNR
n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
	Total Treatme	nt							

Total Treatment Acreage Proposed: 160.8

S t a		Gray	ling Mgt. Unit	Table 4		ents Prescrib ng Factor	ed with	Compartment: 265 Year of Entry 2013	DI NATURAL
n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
			#Error						
Presc Spece	ription <u>s:</u>								
<u>Other</u> Comr									
<u>Next</u> <u>Steps</u>	<u>:</u>								
	ng Factor and No ment Reason	<u>0</u>							
Ac	Total Treatmer creage Propose		0						

S t		ayling Mgt. Unit			atments Pres _imiting Fact	Compartment: 265 Year of Entry 2013	DNR DNR		
a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
7	72265007-Cut	11.9	4116 - Mixed N. Hardwood - Aspen	Medium Density Pole	40	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
Pres Spe		rvest sta	nd to try and expand a	aspen. Some large	clumps o	of maple through	out.		
<u>Othe</u> Corr	er iments:								
<u>Next</u> Step									
11	72265011-Cut	22.6	4139 - Aspen, Mixed Deciduous	High Density Pole	65	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
Pres Spe		rvest witl	h retention islands.						
<u>Othe</u> Corr	<u>er</u> iments:								
<u>Next</u> Step									
13	72265013-Cut	9.9	4133 - Aspen, Mixed Pine	High Density Log	50	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
Pres Spec		rvest wit	h retention islands. L	eave retention near	private b	ooundary.			
<u>Othe</u> Corr	er iments:								
<u>Next</u> Step									
16	72265016-Cut	9.4	4131 - Aspen, Oak	Medium Density Pole	55	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
Pres Spe		stand to	o try and regenerate as	spen. No regenera	tion nece	essary due to sma	all acreage and military	v training area.	
<u>Othe</u> Corr	<u>er</u> iments:								
<u>Next</u> Step									
23	72265023-Cut	65.7	4139 - Aspen, Mixed Deciduous	High Density Log	60	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
Pres Spe		rvest sta	nd. Leave some large	er diameter oak for	mast pro	duction. Harvest	t with stand directly to t	he south.	
Next	<u>iments:</u> t								
<u>Step</u> 24	<u>72265024-Cut</u>	41.4	4139 - Aspen, Mixed Deciduous	Low Density Pole	30	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
Pres Spec		rvest sta		n. Harvest with sta	ind direct	ly to the north.	Apply retention by pain	ting out multiple small is	·
Othe									
Next Ster	ţ								

Year of	FEntry:	2013
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Out of YOE -- Treatments Prescribed with No Limiting Factor

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status	
Prescription Specs:									
<u>Other</u> Comments:									
Next									

Steps:

Total Treatment Acreage Proposed:

0

S t	Graylin	g Mgt. Unit		5 – Fe	prested Sta	nds Compartment: 265 Year of Entry: 2013
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4130 - Aspen	High Density Pole	8.9	25	51-80	Good quality aspen stand. All corners are in, no treatment at this time.
2	4130 - Aspen	High Density Sapling	36.8	6		cut in 2005 Fighter Plane Aspen. Very good aspen regen. Some areas are a little sparse. Not much oak or maple regen. Do nothing.
3	4199 - Other Mixed Upland Deciduous	High Density Log	5.1	65	111-140	Sawlog sized stand separated from pole sized stand by deep ravine. North line is denoted by county road. About a 2 acre pocket of dying aspen, could be cut and is operable, but the rest is pretty steep and would need to be hand cut and possibly cabled.
4	4130 - Aspen	High Density Sapling	47.0	6	1-50	Cut in 2005, fighter plane aspen. Good Regen, some oak near openings. Not much merchantable at this time. Do nothing.
5	4130 - Aspen	Medium Density	19.6	25	1-50	Stand was cut 20+ years ago, decent regen. Some birch. Just getting to merchantable status, Wait ten years until going into this stand. Do nothing.
6	4139 - Aspen, Mixed Deciduous	High Density Sapling	16.8	4		stand cut in 2007 sale 726470701 kp lake aspen 2. nice regen.
7	4116 - Mixed N. Hardwood - Aspen	Medium Density Pole	11.9	40	51-80	Trace of beech and ash. Sparse stand with pockets of aspen broken by numerous bare pockets and large maple clumps. Could be a good aspen stand if cut to try and expand aspen regen. Coppice Regen?
8	4130 - Aspen	High Density Sapling	34.2	6		Aspen stand previously cut under sale #720120401 Fighter Plane Aspen completed in 2005. Good regeneration.
10	4119 - Mixed Northern Hardwoods	High Density Sapling	101.3	18	1-50	Thick cover of aspen, red maple and various other species. Looks to have been cut recently, previous inventory says 1986. Not much of merchantable size yet. Do nothing at this time.
11	4199 - Other Mixed Upland Deciduous	High Density Pole	22.6	65	51-80	Mixed hardwoods stand. Some of it is struggling and nothing of great quality.
12	4130 - Aspen	High Density Sapling	77.1	4		stand cut under sale 726470701 kp lake aspen 2. nice regen. Cabin is listed under life lease for Jerry Laycock. As of this date he is still alive. The owners rights terminated upon his death, non-transferrable.
13	4133 - Aspen, Mixed Pine	High Density Log	9.9	50	51-80	Aspen is looking pretty sad. Private boundaries on north side, all corners are in. Some decent red pine throughout stand.
14	4130 - Aspen	High Density Pole	18.9	26	51-80	Good aspen regen, no sign of disease or decline. Evaluate in ten years. Do nothing at this time.
15	4130 - Aspen	High Density Sapling	10.2	6		final harvested in 2005, fighter plane aspen. Good aspen regen, do nothing at this time.

Grayling	Mgt.	Unit
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5 – Forested Stands



General Comments: Aspen with some oak throughout. Stand has some rolling terrain, good access. Decent regen in this stand. Not a whole lot of oak. Has an illegal blind with some shooting trails. Do nothing. A small stand that was recently acquired. Has a cabin on it that appears to still being used. Do nothing at this time.
terrain, good access. Decent regen in this stand. Not a whole lot of oak. Has an illegal blind with some shooting trails. Do nothing. A small stand that was recently acquired. Has a cabin on it that
illegal blind with some shooting trails. Do nothing. A small stand that was recently acquired. Has a cabin on it that
cut in 2005, ZZ Top Aspen. High density aspen regen. Do nothing.
stand cut in 2007 under sale 726470701 kp lake aspen 2. nice regen. not much oak coming back.
Clearcut in 1993. High density aspen regen. no treatment.
Stand is approaching merchantable size. Look at it again in ten years. Oak is struggling, aspen looks good. Some steep terrain, has a well site in stand. Do nothign at this time.
mixed stand. Large aspen and oak. Aspen is starting to decline in areas. Diameter decreases to north of the stand.
Stand has large pockets of decent quality aspen throughout. Also has some spotty open areas and some areas with hypox.
Stand was cut in 2004, ZZ Top Aspen. Spotty regen, lots of open areas within stand. Do nothing.
Stand cut in 2005. ZZ Top Aspen. Thick aspen regen, 10-12 foot tall.
High stem density aspen. some hypox damage. Overall seems to be doing well. Do nothing at this point. A few large oak mixed throughout the stand.
Dense aspen with an some pine and cherry scattered through understory. Stand was clearcut in 1994.
Mixed pine stand. Could cut to get more uniform cover types. Good access to stand, aspen is starting to die off. Could leave, let aspen die for soft snags and leave pine for species diversity in the area.

S t	Grayling) Mgt. Unit		5 – Fo	prested Sta	nds Compartment: 265 Year of Entry: 2013
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	4130 - Aspen	High Density Sapling	46.2	27	1-50	Some merchantable sized throughout. Quality is decent, still very dense. Evaluate in ten years. Good access to stand, flat terrain. Some hypox throughout, larger aspen in Northeast corner.
32	4130 - Aspen	Medium Density Pole	7.5	50	81-110	Mixed stand made up of mostly aspen. Some nice red pine mixed throughout.
34	4130 - Aspen	High Density Sapling	28.6	17		Stand clearcut in 1995. Dense aspen regen on west side of stand. gets less dense as you go east. all similar sized, some larger oak throughout. Do nothing.
35	42110 - Planted Red Pine	High Density Pole	4.0	63	111-140	Nice red pine stand. Small acreage. Stand has not been third row thinned and the rows are very difficult to determine.
36	4131 - Aspen, Oak	Low Density Pole	3.4	20	1-50	Very low density pole sized aspen with a small amount of small struggling oak regen. Do nothing, leave for soft snags.
37	4132 - Aspen, Jack Pine	Medium Density	55.6	26	1-50	Lots of aspen regen with a fair amount of pine mixed in. Stand has some rolling terrain. Similar to stand 31 but more evident pine component. Do nothing at this time.
39	4131 - Aspen, Oak	Medium Density Pole	46.9	5	1-50	Stand was thinned in 2006 under 612 and range road oak. Scattered aspen with some oak pine mix. Quality is poor, size is small. Some hypox, do nothing at this time.
40	4130 - Aspen	High Density Sapling	15.8	26		Smaller diameter dense aspen regen. Has an oak and maple component. It is approaching merchantable size. No treatment at this time.
41	4130 - Aspen	High Density Sapling	21.4	17		Stand was final harvested in 1994. High density small diameter aspen with some oak and red maple mixed in. Do nothing at this time.
42	4131 - Aspen, Oak	High Density Sapling	23.7	6		Small diameter high density aspen with some occasional oak scattered throughout. Do nothing at this time.
43	4131 - Aspen, Oak	High Density Sapling	9.9	26	1-50	Dense aspen stand, cut in 1985 according to previous inventory. Some red pine and oak mixed in. Do nothing.
44	4123 - Red Oak	High Density Log	4.4	75	81-110	Lots of smaller log stock. Could wait to treat, let aspen to continue to decline and die for soft snags. Evaluate in ten years. Steep terrain in this stand and highly visible from CR-612.
45	4130 - Aspen	High Density Sapling	14.5	18		Stand was clearcut in 1993. Dense aspen regen with a small amount of cherry and maple throughout. No treatment.
46	4130 - Aspen	High Density Sapling	42.9	17		Dense aspen with an oak understory, snowmobile trail goes through stand.Stand was clearcut in 1994.

S t	Grayling Mgt. Unit			5 – Forested Stands		Inds Compartment: 265 Year of Entry: 2013
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
47	4130 - Aspen	Medium Density Pole	14.0	18	1-50	mixed stand with railroad grade snowmobile trail passing through it. No treatment, stand is just approaching merchantable size. Some steep terrain in this area as well. Stand was cut in 1993.
48	4131 - Aspen, Oak	High Density Log	112.7	55	81-110	MIMS plots located in this stand. Sent an email to Roger Mech to see if they are still active. Snowmobile runs through part of this stand. Sawlog sized mixed oak and aspen. Good access to stand. Stand becomes less dense on south end.
49	4131 - Aspen, Oak	High Density Sapling	91.2	26	1-50	Dense aspen regen as a result of previous species removal. Some of the aspen is approaching merchantable size. Oak was left, so there are scattered large diameter oak left throughout stand. No treatment at this time.
50	4139 - Aspen, Mixed Deciduous	Low Density Sapling	24.7	35		Upland shrub with a lot of cherry. Scattered aspen pockets, no treament.
51	4130 - Aspen	High Density Sapling	23.8	25		Dense aspen with a light oak component in the understory. No treatment.
52	4130 - Aspen	High Density Sapling	79.1	26		Dense aspen regen with oak and maple component. No treatment at this time.
53	4130 - Aspen	High Density Sapling	26.3	18		Clearcut in 1993. Very dense aspen regen with scattered oak and red maple throughout. no treatment.
54	4131 - Aspen, Oak	High Density Pole	36.5	50	81-110	Mixed stand with oak aspen red maple and white oak.

Compartment: 265 Year of Entry: 2013



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:	
9	3102 - Grass	0.7	N\A	Unspecified		
33	310 - Herbaceous Openland	3.9	N\A	Unspecified		
38	310 - Herbaceous Openland	19.5	N\A	Unspecified		



7 – 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.

Stand	SCA Type	SCA Name	Acres	Comments



8 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

Conservatio Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from s approved distance from the river centerlines. The Natural River most Natural Rivers. The Vegetative Buffer ranges from 25 to 1 and Vegetative Buffers for each Natural River see the table loca folder.	s Zoning District is a 400 foot buffer for 00 feet. To view specific Zoning Districts
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for include the 5,847 acre Forest Fire Experiment Station, the 12,00 Area, the Beaver Islands Archipelago Wildlife Research Area (the High and Hog Islands, all state owned land on Beaver, South For Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Re Nursery, and over 144,000 acres of Military Lands.	00 acre Houghton Lake Wildlife Research nat includes most of Garden Island, all of ox and North Fox Islands), the Cusino