



**GRAYLING FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW RESENTATION**

COMPARTMENT # 201 ENTRY YEAR: 2008

GIS Compartment Acreage: 1912 County: Crawford

Revision Date: October 9, 2006

Stand Examiner: Joan Charlebois

Legal Description: T26N R4W Sections 25, 26, 27

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

Soils and Topography: The terrain slopes upward from Lake Margrethe to Wilson Hill Road and then is level to gently rolling beyond. Grayling and Graycalm-Grayling sands of varying slope predominate.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Part of the Michigan Army National Guard's Camp Grayling lies within this compartment which consists entirely of Military Board ownership. Most of that ownership is within the Hanson Military Reserve, with the exception of one forty in Section 26. Hanson Reserve Lands were given to the National Guard, Department of Military Affairs (DMA) by Rasmus Hanson in 1913, with several deed restrictions as outlined under the management goals. These restrictions have tasked the DNR with managing the natural resources on these lands, as long as management activities do not conflict with military needs. In addition, hunting is prohibited on the Hanson Reserve Lands.

Unique, Natural Features (include only non-site specific and non-sensitive information): None known.

Archeological, Historical, and Cultural Features: The military's long history of use in the area is evidenced by decommissioned structures and improvements in the vicinity of Camp Grayling.

Special Management Designations or Considerations: Hanson Reserve Lands, as designated through original deed restrictions. Most of Camp Grayling's Land-Nav orienteering course lies within this compartment. The Hanson Hills Recreation Area extends into this compartment.

Watershed and Fisheries Considerations: The compartment just touches the south shore of Lake Margrethe.

Wildlife Habitat Considerations: Opportunities for specific wildlife habitat management activities are limited due to military use, however, a wide variety of both game and non-game species would benefit by maintaining the current mix of grass, jack pine, oak and aspen cover types.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift are the Coldwater Shale and Marshall Sandstone. The Marshall was previously used as a building stone. A gravel pit is located in Section 34 and there is good potential. The compartment is not leased for oil and gas development.

Vehicle Access: Military Road runs through the compartment. Howe Road, Wilson Hill Road and the South Access Road are within Camp Grayling's fenced cantonment area. Beyond the fence, sandy two-tracks associated with military training maneuvers crisscross the compartment.

Survey Needs: None

Recreational Facilities and Opportunities: The compartment has no developed recreational facilities west of Military Road except for those associated with the camp itself. Military training needs take precedence over all other considerations, and any recreation – even if dispersed – cannot be allowed to conflict with military activities. Hunting is specifically prohibited per Hanson Reserve Lands deed restrictions, but hunting is allowed on the non-Reserve forty in Section 26. Recreational trails have been developed east of Military Road and include the Hanson Hills-to-Grayling Snowmobile Trail, the Shore-to-Shore Riding/Hiking Trail, and part of the Hanson Hills Recreation Area's cross-country ski trail and mountain bike trail systems.

Fire Protection: Aside from a few small jack pine stands, the compartment is dominated by upland oak types. Access is good through an extensive network of sandy two-tracks, but fences associated with the Camp may hinder fire response west of Military Road. There is the potential for encountering unexploded military ordinance during firefighting operations. Camp Grayling's fire department has two 6x6 engines that are equipped to fight wildland fires.

LOTS Compartment Acreage: ____1920____

- **The following 5 reports from the Operations Inventory System (OIPC) are attached:**
 - ◆ **Cover Type by Age Class**
 - ◆ **Cover Type by Management Objective**
 - ◆ **Compartment Volume Summary**
 - ◆ **Proposed Treatments – No Limiting Factors**
 - ◆ **Proposed Treatments – With Limiting Factors**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand numbers, cover types**
 - ◆ **Proposed treatments**
 - ◆ **Proposed road access system**
 - ◆ **Suggested potential old growth**

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Michigan Department of Natural Resources - Operations Inventory System
Individual Compartment Report

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: 201

Table 3A

(acres shown in boxes)

MANAGEMENT OBJECTIVE TYPE

COVER TYPE	A	S	V	C	G	H	J	I	L	P	N	Q	X	O	B	R	K	Y	F	E	T	D	U	M	Z	W	Total	
A Aspen	74																										74	
G Grass					68																						68	
J Jack Pine													26														26	
I Local Name								162																			162	
X Non Stocked													49														49	
O Oak	22													1229		119									20		1390	
R Red Pine																12											12	
U Upland Brush																								65			65	
M Upland Hdwds																									62		62	
Z Water																									1		1	
W White Pine																										3	3	
Total	96				68			162					49	1255		131								65	82	1	3	1912

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: **201**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	12347 Cds	Hardwood	5200 Cds
Hardwood	6814 Mbf	Hardwood	2159 Mbf
Softwood	395 Cds	Softwood	36 Cds
Softwood	17 Mbf	Softwood	17 Mbf
Sum TotVol	26404 Cds	Sum CutVol	9588 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	672
1912			

GRAYLING FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 201 Entry Year: 2008

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FD Status
17	O9	3	87	65	oak	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : Stand split in two by cantonment fence clearing. E1/2 (Stand 18) is isolated between the road, cantonment fence & ammo supply point fence. Stand 17 (west 1/2): recommend final harvest except leave 1 wolf oak (red or white) per acre for vertical diversity/visuals & wildlife dens. Goal is to achieve a mix of oak & RM through stump sprouting. Harvest at same time as adjacent stand 10 in Compt 185 to west. Used that stand's SI.</p>										
22	O9	38	85	57	oak	mature	seed tree	2	planting	
<p>comnts Fmd : Fair-quality RO: larger saw a bit wolfy w/ low forks, large limbs & poorly-healed branch scars common. Smaller saw better formed. BTA as scattered individual stems & in denser pockets. Relatively level ground, slight valley running NW-SE w/ poor RO & NPO. Open below. BTA rounded up to 10 BA (4 actual). Stand 21 was split off by cleared powerline corridor. Prescription: seed tree cut, reserving 20 BA of large-crowned, dominant and even wolfy oak for seed trees, as they will be least likely to epicormic branch terribly. Choose oak (favoring WO) that are showing the least amount of decline and that are likely to survive the longest. Cut all aspen & don't leave oak seed trees in/adjacent to aspen pockets. Leave all RM. Leave any RP or WP that may occur within the stand. Plant to RP, scarifying as shallowly as possible & avoiding aspen pockets. Treat the rest of this stand's contiguous covertype that extends south into compt 200 (stand 22) at the same time. Compt 200's stand 22 is currently coded TP-1 (2013 is the next YOY).</p>										
23	O9	114	83	56	oak	mature	thinning	1	planting	
<p>comnts Fmd : Fair- to decent-quality small RO saw, with NPO on low ground & at stand margins. Terrain is gently-rolling. Ski trail re-route runs through E end of stand. Also has scattered BTA & occasional super-canopy RP & WP that are seeding in localized areas. Oak poles tend to be suppressed & of poor quality. Stand contains Military LandNav markers: protect per their specs. Prescription: thin the oak to 60 BA, targeting suppressed poles, oak with poor crown development, & declining sawtimber for removal. Favor WO saw for retention, if reasonably healthy. Retain all WP & RP, & protect existing pine regen. Where that pine regen is moderate-to-well stocked, reduce the oak residual BA to 10-20. In addition to the average 60 BA oak residual, retain all RM to avoid profuse stump-sprouting & the resulting poor-quality multiple-stem clumps. Cut all aspen & remove oak in and around aspen pockets to encourage good aspen root-sucker sprouting. Hand plant WP without disc trenching, if feasible, or scarify as shallowly as possible. Avoid planting within aspen regen pockets.</p>										
29	O9	169	83	56	oak	mature	shelterwood-seed	1	planting	
<p>comnts Fmd : Stand on gently-rolling high ground, mostly decent-quality small RO saw w/ suppressed RO & WO poles. Hybridized RO/NPO at the margins & in low areas. Heavy WP regen & small poles at the far east end. Stand contains Military LandNav markers: protect per their specs. Prescription: shelterwood, taking the oak down to 40 BA residual. Favor for retention large-crowned dominant oak - particularly WO - that are showing the least amount of decline. In addition to the 40 BA of oak, retain all RM, WP & RP. In areas with W2-W3 understory, such as at the stand's far east edge, reduce the residual oak BA to 10-20. Cut all aspen & do not leave any oak within aspen pockets. Hand plant a mixture of WP & RP without disc trenching, if feasible, or scarify as shallowly as possible. Avoid planting through areas with aspen.</p>										
36	O9	119	82	52	red pine	mature	final harvest	2	planting	
<p>comnts Fmd : Stand occupies a series of low ridges & knobs, but doesn't show the usual correlation between elevation & tree quality: there's similarly poor-quality oak on the high ground too. There are small pockets of nicer oak, but my plots didn't land in them. On low ground & at the stand margins, there is branches-to-the-ground NPO. Lots of GM egg masses, specially on the WO. Averaged my SI with previous SI's from within the stand's boundaries. Stand contains Military LandNav markers: protect per their specs. Prescription: final harvest all NPO and the WO pulp. Leave all WO saw for mast & seed sources. Plant a mixture of RP & WP. JP would do well on this site (since it tends toward PVCd), but deer browse is a concern.</p>										
37	A6	6	60	63	aspen (upland)	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : Two size classes of TA: the saw is breaking up &, within the pole component, individual stems are dying back. Cut to regen the aspen, otherwise the RM will take over. Stand includes pockets of NPO saw & scattered individual oak.</p>										
39	O9	22	79	54	aspen (upland)	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : Mostly RO/NPO hybrids w/ some quality RO stems, suppressed WO poles. BTA scattered through the stand. There should be enough aspen to covert to that type over most of the stand, along with oak & RM stump sprouting. The stand boundary to the SE was intentionally expanded to bump up against the 2-track and the east end of stand 38's U/G type. The stand's N boundary was modified to avoid the "straight-line along the compt boundary" syndrome and make the treatment boundary appear more natural as seen from the ski & Mnt bike trails that cross in and out of the stand. Leave all WO saw and healthy WO poles for visuals, and seed source, since viable WO regen has been found to recruit from seed in this area when the canopy is opened up, although not as a consistent rule.</p>										
42	J5	26	54	50	oak	two aged	removal	2	natural regeneration	
<p>comnts Fmd : Uneven-aged JP stand with 3+ age classes. Scattered massive overmature JP saw, 50-yr old poles/small saw that are already declining, & small poles & regen present. In most areas, where open enough, there is O2-O3 in advanced secure NPO regen. Terrible health & quality NPO actively breaking up (stand intentionally includes 2 fingers of stand 41's oak cover type). Heavily-used deer trails cross through the stand. To release the existing oak regen, along w/ the JP seedlings & saps, cut all merchantable stems, except leave any WO for additional seed source. Resulting stand will be a mix of oak & pine. Add spec to protect the oak regen during harvesting. Stand contains a Military LandNav marker: protect per their specs.</p>										

GRAYLING FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 201 **Entry Year: 2008**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FD Status
47	O9	37	82	54	oak	mature	final harvest	1		
<p>comnts Fmd : There is some decent-quality small RO saw, but the stand as a whole is represented by poorer-quality oak with varying degrees of hybridization. RO poles are suppressed & declining. BTA as scattered individuals & small clones was underrepresented by the plot data. RM is common in just sub-merch stump sprout saplings. Final harvest the oak & aspen in order to encourage sprout-origin regen. Leave the existing RM so that it will develop into better-quality single stems. Stand contains a Military LandNav marker: protect per their specs. Set up as one sale with stands 53, 54, 55 & 56.</p>										
53	O9	62	82	59	oak	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : Small-diameter fair-quality RO saw w. some hybridization. RM poles more common than the oak poles in half the stand. Scattered individual BTA stems & small clones (rounded up to 10 BA). Stand includes a narrow strip of oak E of the N-S 2-track. Grayling Game Club signs on the 2-track are in trespass, except near Sec 25's SE corner where the 2-track & the E section line converge. Final harvest the oak & aspen to encourage sprout-origin regen. Leave the existing RM so it will develop into better-quality single stems. A Military LandNav marker occurs in stand 65's patch cut: protect per their specs. Set up as one sale with stands 47, 54, 55 & 56.</p>										
54	O9	35	82	55	oak	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : More-or-less hybridized RO & marginal WO saw over a lot of suppressed poles with dieback & mortality, especially in the WO poles. Final harvest the oak to encourage sprout-origin regen. Leave the existing RM so it will develop into better-quality single stems. Stand contains a Military LandNav marker: protect per their specs. Set up as one sale with stands 47, 53, 55 & 56.</p>										
55	O8	20	87	51	northern hardwood	low quality	removal	1	natural regeneration	
<p>comnts Fmd : In shallow valley bottom, poor site with very poor NPO saw culls (breaking up), <half-acre pockets of varying age & health TA, RM large saps below, & U/G inclusions. Overall, low-quality oak with well-established RM regen. Used previous SI. Final harvest (along with stands 47, 53, 54 & 56) in order to regenerate the aspen & release the seed-origin RM saps. Leave all RM & pine & protect the RM regen.</p>										
56	A5	6	45	73	aspen (upland)	high risk	final harvest	1	natural regeneration	
<p>comnts Fmd : Mix of overmature, declining cull TA saw with large poles. Some areas sparse. Even the smaller poles are breaking up. Final harvest to regenerate before it completely falls apart. Set up as one sale with stands 47, 53, 54 & 55.</p>										
Total Acres.....		657								

GRAYLING FOREST MGT UNIT

**Proposed Treatments
With Limiting Factors**

Compartment: 201 **Entry Year: 2008**

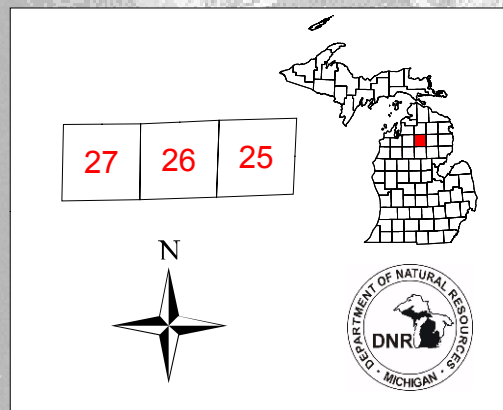
Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status
15	O9	15	85	64	oak	mature	final harvest	1	natural regeneration	

TREATMENT LIMITING FACTORS: Military use/easement/lease/long-term agreement

comnts Fmd : Rolling terrain w/ a long ridge: most of the high ground is occupied by v. nice RO saw with nice tall poles too, although there are fair-poor form knobby RO saw mixed in. There are lg wolf oak on the flats along the powerline corridor. See stand 3's comments regarding deer browse problems within the cantonment fence. SI averaged across the oak cover type within the fence (6 SI's, range: 61-67). Recommend final harvest to regenerate a mix of oak, RM & aspen. Treat at same time as compt 185's stand 7 to west.

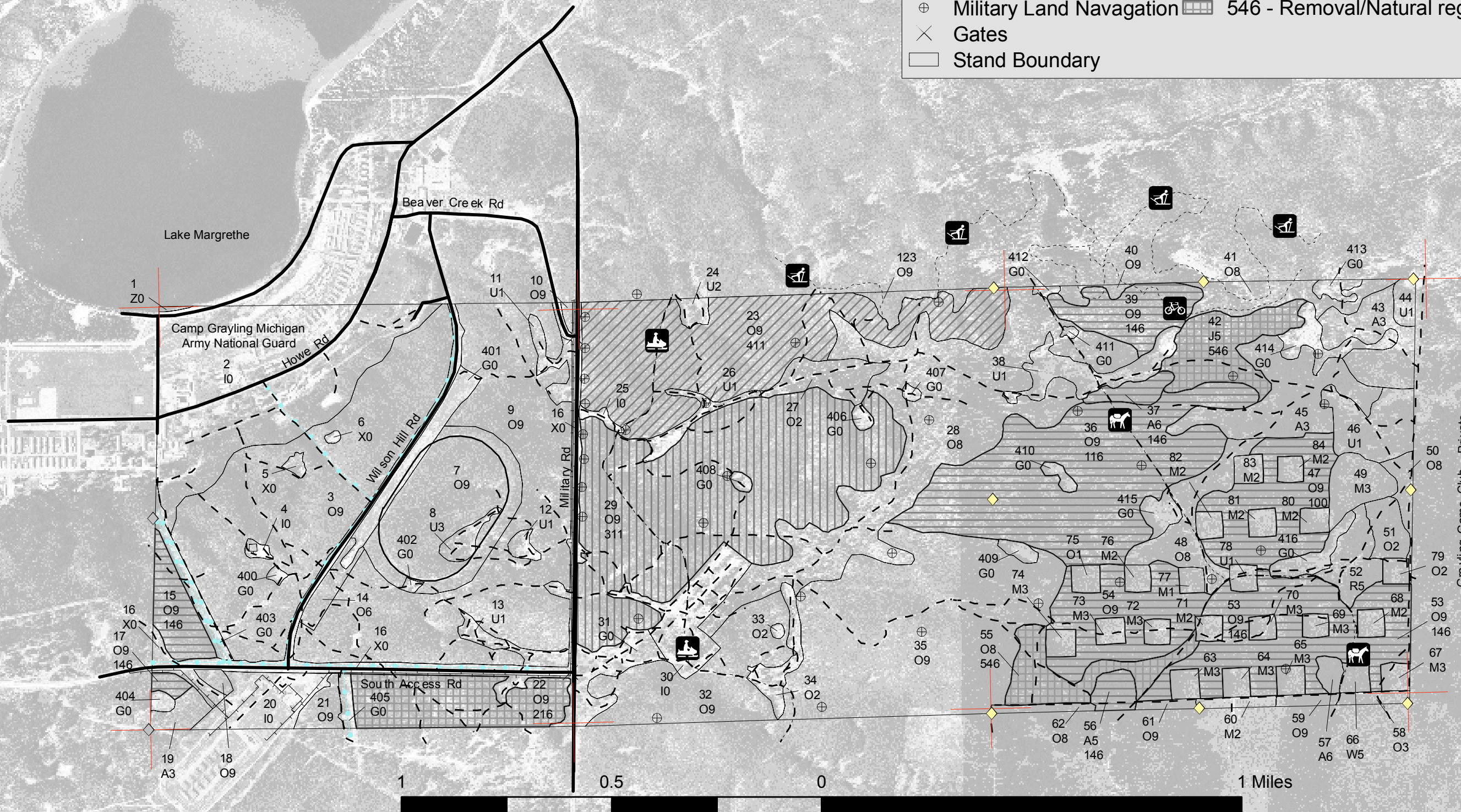
Total Acres..... 15

Compartment 201
 T26N, R04W, Sec. 25, 26, 27
 County: Crawford
 Unit: Grayling
 YOY: 2008
 Acres: 1,912 GIS Calculated
 Stand Examiner: Joan Charlebois
 Map Revised: 10/16/2006
 Map Phase: Pre-review



Field Map

Legend			
◆	RLS Corners		Snowmobile Trails
◇	RLS Corners unfound		Ski Trails
—	Miris Corners		Bike Trails
—	Paved Roads		Horse Trails
- -	Poor Dirt Roads		100 - Final harvest
- - -	Snowmobile Trails		116 - Final harvest/Planting
—	Powerlines		146 - Final harvest/Natural regeneration
—	Training Track		216 - Seed tree/Planting
—	Military Fence		311 - Shelterwood-seed/Planting/Hand tools
⊕	Military Land Navigation		411 - Thinning/Planting/Hand tools
×	Gates		546 - Removal/Natural regeneration
□	Stand Boundary		



Grayling Game Club - Private