



## GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 186 ENTRY YEAR: 2011

GIS Compartment Acreage: 1,933 acres County: Crawford

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**Revision Date:** 9/2009

**Stand Examiner:** Craig Farrer

**Legal Description:** T26N, R04W, Sections 31, 32, and 33, Grayling Township.

**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 soils within this compartment consist of well drained Rubicon, Roselawn, and Grayling sands. Topography within this compartment consists of rolling terrain with some pot holes.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** The compartment is entirely in the Hanson Game Refuge being solid Military Board land. There is heavy military use throughout the compartment. This compartment contains several ranges: a grenade range in section 33, part of the mortar range #13 in section 32, and an old infantry emplacement area in section 31. This compartment is also surrounded by more Military Board lands.

**Unique, Natural Features (include only non-site specific and non-sensitive information):** Dusted Skipper was documented within the compartment in section 31. There is the potential for pine barrens species and dry prairie plant and animal species to exist within the compartment.

**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** None known at this time.

**Special Management Designations or Considerations:** The entire compartment is Hanson Reserve lands. All management considerations and uses of these lands is to meet the deed restrictions which are as follows: The land is to be used as a permanent encampment and maneuvering ground for the military; to serve as a game preserve and a forest reserve.

**Watershed and Fisheries Considerations:** The compartment does not contain any water bodies.

**Wildlife Habitat Considerations:** To manage and maintain cover types and habitats for non-game and game species throughout the compartment. The Hanson Game Reserve deed restrictions prohibit hunting which as resulted in high deer populations in this immediate area. There is evidence of heavy browse throughout the compartment. Examination of cuts performed in the past year have revealed most oak regeneration has died, it appears the stump sprouts were heavily browsed which probably contributed to the mortality of the regeneration. The heavy deer yarding and browsing in this area needs to be considered when making treatment prescriptions.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Marshall Sandstone. The Marshall was previously used as a building stone. A gravel pit is located in Section 33 and potential is good on upland areas. None of the compartment is leased for oil and gas, but leases are located one-half mile to the south. The entire compartment is classified as non-development per Department of Military Affairs.

**Vehicle Access:** There are numerous trail roads within the compartment due to military training. Most of these trail roads can be accessed from the county roads of Military road and Beaver Road. The compartment can be access from several trails leading from the Camp Grayling Military Base, these trails are restricted access via gates maintained by the military.. If any road closure is to occur within the compartment it needs to be agreed upon by Camp Grayling and any newly created roads due to the treatment of stands within the compartment are to be closed when treatment or treatments are finished.

**Survey Needs:** None

**Recreational Facilities and Opportunities:** There are no designated recreational trails or facilities within this compartment. Hanson Game Refuge deed restrictions prohibit hunting within this compartment except in the W1/2SW1/4 section 31 and the SE SE of section 33. These parcels of state land were acquired later and are not confined to the deed restrictions. There is no designated trail system within the compartment, but snowmobiler's use some of the two tracks during the winter when the range is inactive.

**Fire Protection:** Fire protection within this compartment is the responsibility of the Camp Grayling Military Fire Department, the Michigan DNR and Grayling Volunteer Fire Department. There is no nearby water source other than Camp Grayling Military Base for the compartment and access for fire equipment is adequate.

**Additional Compartment Information:** Military burns range 13 off every spring to reduce large fires from occurring during summer training on the range.

**LOTS Compartment Acreage:** \_\_\_\_\_

- **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**



11/5/2009 7:33:14 AM

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

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: 186

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	194																										194
G Grass					97																						97
J Jack Pine							245																				245
X Non Stocked													42														42
O Oak														883										252			1135
U Upland Brush																								166			166
M Upland Hdwds																								54			54
Total	194				97		245						42	883									166	306			1933

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: **186**

**Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS**

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	13440 Cds	Hardwood	6776 Cds
Hardwood	3472 Mbf	Hardwood	1963 Mbf
Softwood	1684 Cds	Softwood	878 Cds
Softwood	131 Mbf	Softwood	24 Mbf
Sum TotVol	22330 Cds	Sum CutVol	11628 Cds
<b>Total Cmpt Acres</b>		Acres Proposed For Cut.....	
1933		644	

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status
13	J6	61	55	49	jack pine	mature	final harvest	1	planting	
comnts Fmd : 2009 Notes: Mature Jack pine stand mixed with Aspen and some Mature Oak. Stand is under long-term military lease and the east side of stand borders the Mortar Range (Range 13-14). Recommend final harvest with similar stand to the south in compartment 187 (2010 yr of entry). Replant to Jack Pine if possible or let regenerate naturally. Should get Oak, Aspen and Jack Pine as a mix. Retention should be considered along the tank trail around the edge of the mortar range fence. Old notes:Oak age 80 plus, mix of 01J1A4J4.										
19	O6	33	87	51	oak	immature	final harvest	1		
comnts Fmd : 2009 Notes: Recommend final harvest, no retention. Mixture, maple in the valleys along trail, oak on the ridges. Will accept a mixture of red maple, aspen and oak regen.										
23	A6	24	41	63	aspen (upland)	immature	final harvest	1		
comnts Fmd : 41 yr old Aspen stand mixed with Oak and Red Maple. Stand is under long-term military lease. Stand borders Range 13. Recommend final harvest with no retention. If retention is needed, leave patches long tank trail. This stand could hold 10 to 20 yrs more before harvest.										
24	O9	77	89	62	oak	mature	shelterwood-seed	1	natural regeneration	
comnts Fmd : 2009 Notes: Field trip to site with biologist and silviculturist resulted in recommendation of performing a shelterwood harvest in stand. Lots of pockets of white oak seedlings resulting from thinning last time. Make sure you remove trees from around the seedling pckets to release them. Shelterwood remainder of stand. Can leave clumps or patches of oak for mast and retention. Looking for Oak regeneration if possible from stump strouts. May want to underplant scattered white pine sporadically throughout stand after the harvest- but not required. Depends if funding is available, would be nice to reintroduce pine component in stand and concerns about heavy deer browse in area due to hunting restrictions. There are some Red and White sapling in understory. Will accept a mix of all species of regeneration. Leave BA heavier along trail bordering Range 13 fence. Note, this is military, need military permission. Stand is obviously not used actively for training. Has some nice oak in it. Old notes: STD THINNED IN 1992 UNDER SALE #60-91-1, REMOVED APPROX 30 BA										
29	O6	34	67	51	northern hardwood	immature	final harvest	1	natural regeneration	
comnts Fmd : Refer to stand 30 comments regarding treatable portions: ". . . Per silviculturalist, recommend final harvest south slopes only. Leave north slopes alone. Cut and expect a mix of natural regeneration of aspen, red maple, and oak via stump sprouts. Will not get back a full stocking of oak, but plan on a mix. Prescribe entire stand but in reality only a portion of the stand will be harvested. Create a stand 130 as the harvested portions- estimated that as 1/3 of acreage. Remainder of stand will stay as stand 30 and remain unharvested. SJT"										
30	O6	102	87	50	oak	immature	final harvest	1	natural regeneration	
comnts Fmd : Stand is very hilly. Per silviculturalist, recommend final harvest south slopes only. Leave north slopes alone. Cut and expect a mix of natural regeneration of aspen, red maple, and oak via stump sprouts. Will not get back a full stocking of oak, but plan on a mix. Prescribe entire stand but in reality only a portion of the stand will be harvested. Create a stand 130 as the harvested portions- estimated that as 1/3 of acreage. Remainder of stand will stay as stand 30 and remain unharvested. SJT										
33	O9	141	87	58	northern hardwood	two aged	delayed removal	1		
comnts Fmd : Former treatment ended up with nice oak overstory over a dense understory of aspen and red maple, that are 10-15 feet tall. Aspen starting to be shaded out. Need to remove overstory oak to release patches of aspen and red maple. We have converted this stand away from oak. In areas where we want to maintain some patches of oak, mash the red maple down and clearcut the oak to give oak sprouts opportunity to compete. Is concern over heavy deer browse taking out the oak. Leave patches of oak for visual and mast and retention thoroughout the sale area. Will need military permission to treat. Old comments:Cut the aspen and maple, mark some white oak to cut were it's a solid type. Stand was thinned in 2005-2006 under contract 72-049-01-01 Cote Came Thin Block. No FTP was needed following the sale.										
34	O9	77	84	58	northern hardwood	mature	final harvest	1	natural regeneration	
comnts Fmd : Mature Oak stand mixed with Aspen and Red Maple. Very open in the understory, not much regeneration. Used by the Military heavily in the past and maybe still be using it heavily yet. Camps where set up in the understory. Stand is military hanson grant lands. Visited site in Oct 2009 with Wildlife biologist and silviculturalist. Determined stand should be treated now if we are to get any oak regeneration at all. Oak is aging so, we are losing it and stand is dominated by oak. Final harvest site and expect it to regenerate to primarily red maple and aspen, which has happened in adjacent stands that were clearcut. Leave retention islands of healthy oak and protect roads needed by military for training purposes, otherwise cut as much as possible to allow for lots of browse to overwhelm heavy deer browse impacts in area. Since no hunting is allowed in area, there is heavy deer browse.										
35	O9	41	89	58	oak	mature	thinning	1		
comnts Fmd : 2009 Notes: Mature Oak stand which has pockets of Aspen within it and scattered Red Maple. Stand is under long-term military lease. Recommend thinning stand to 60-70 BA. Remove all Aspen and Red Maple.LOCATED NEAR NATIONAL GUARD AMMO SUPPLY POINT. THIN NEXT TIME.										

**GRAYLING FOREST MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 186**    **Entry Year: 2011**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status
37	M9	54	84	75	northern hardwood	immature	thinning	1		
<p>comnts Fmd : 2009: Evenaged Northern Hardwoods stand. With little to no regeneration in the understory. Stand had a lot of Paper Birch in the past, but is now dying out of the stand. Stand is a mix of some Oak; pockets of Aspen and scattered Basswood and Beech along with the dominate Sugar and Red Maple. Recommend thinning the stand to between 70 and 80 BA and add some regeneration gaps throughout the stand. Stand is under long -term Military lease and is part of the Hanson Refuge. Old Notes: ASPEN CLONES HARVESTED ABOUT 30 YEARS AGO. PATCHES OF A3 THROUGHOUT. POSSIBLY THIN IN 10 YEARS.</p>										
<b>Total Acres.....</b>		<b>644</b>								

**GRAYLING FOREST MGT UNIT**

**Proposed Treatments  
With Limiting Factors**

**Compartment: 186**    Entry Year: 2011

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDI Status
9	O5	52	85	52	oak	immature		0	natural regeneration	

TREATMENT LIMITING FACTORS: Retention of stand for regeneration purposes (ie. shelterwood)

comnts Fmd : (Mark to 40% crown cover. Leave 40 BA. Old comment.) Timber sale # 72-026-02-01 (Infantry Encampment). Cut by Chris Muma Forest Products in 2005. Residual after marking the stand was 44 square feet. 06/10/2005 mm 2009: Recommend an underburn to set back Aspen, Red Maple and Cherry.




















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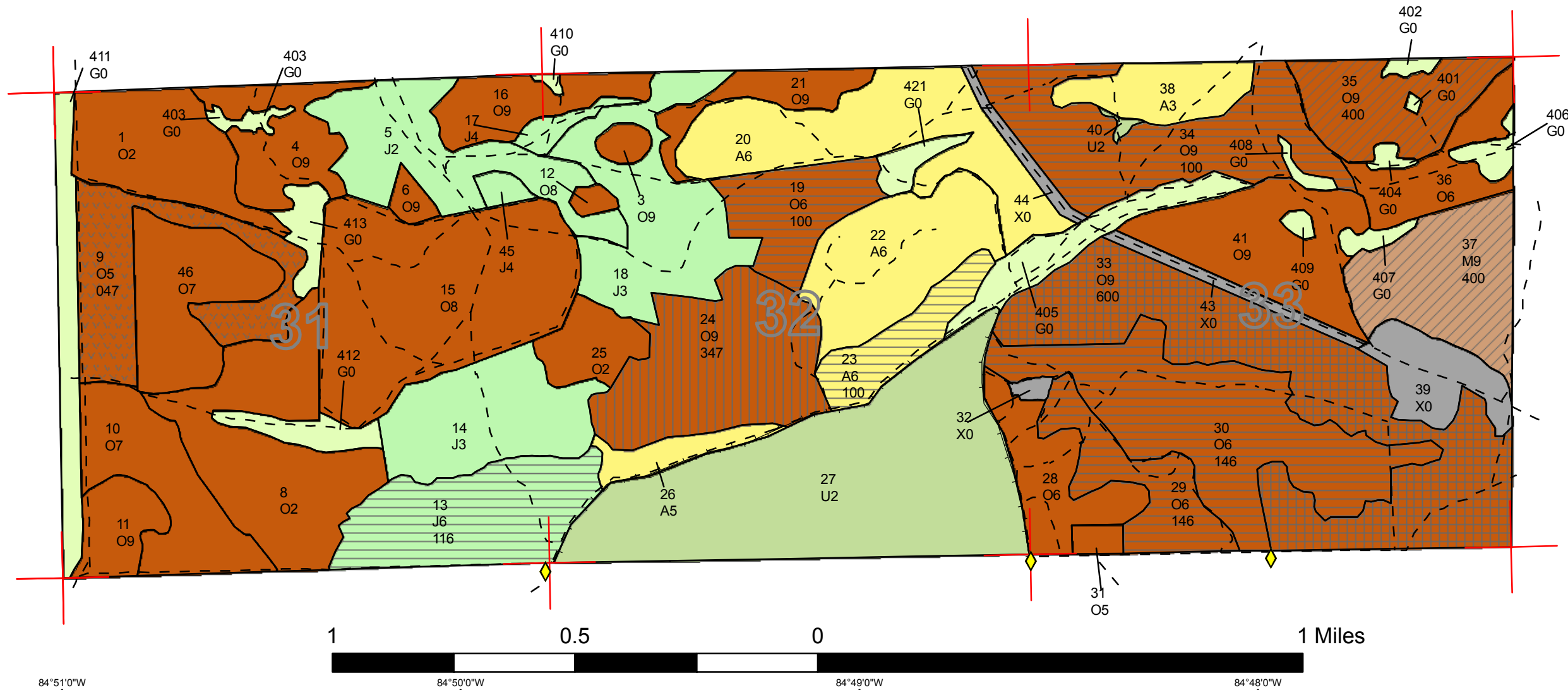
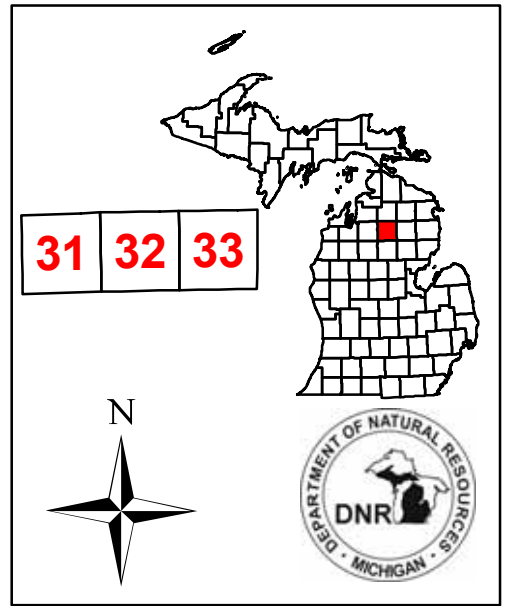
**Total Acres..... 52**

# Covertypes & Treatment Map

Compartment 186  
 T26N, R04W, Sec. 31, 32, 33  
 County: Crawford  
 Unit: Grayling  
 YOE: 2011  
 Acres: 1,933 GIS Calculated  
 Stand Examiner: Craig Farrer  
 Map Revised: 11/02/2009  
 Map Phase: Pre-review

## Legend

- |   |  |   |                        |
|---|--|---|------------------------|
|  | RIs Corners  |  | A - Aspen              |
|  | Miris Corners  |  | G - Grass              |
|  | Poor Dirt Roads  |  | J - Jack Pine          |
|  | Range Fence  |  | M - Northern Hardwoods |
|  | Stand Boundary   |  | O - Oak                |
|  | 047 - Natural Regeneration/Prescribed Burning                    |  | U - Upland Brush       |
|  | 100 - Final Harvest  |  | X - Non-Stocked        |
|  | 116 - Final Harvest/Planting                                     |   |                        |
|  | 146 - Final Harvest/Natural Regeneration                         |   |                        |
|  | 347 - Shelterwood - Seed/Natural Regeneration/Prescribed Burning |   |                        |
|  | 400 - Thinning   |   |                        |
|  | 600 - Delayed Removal  |   |                        |



# Stand Boundary Map

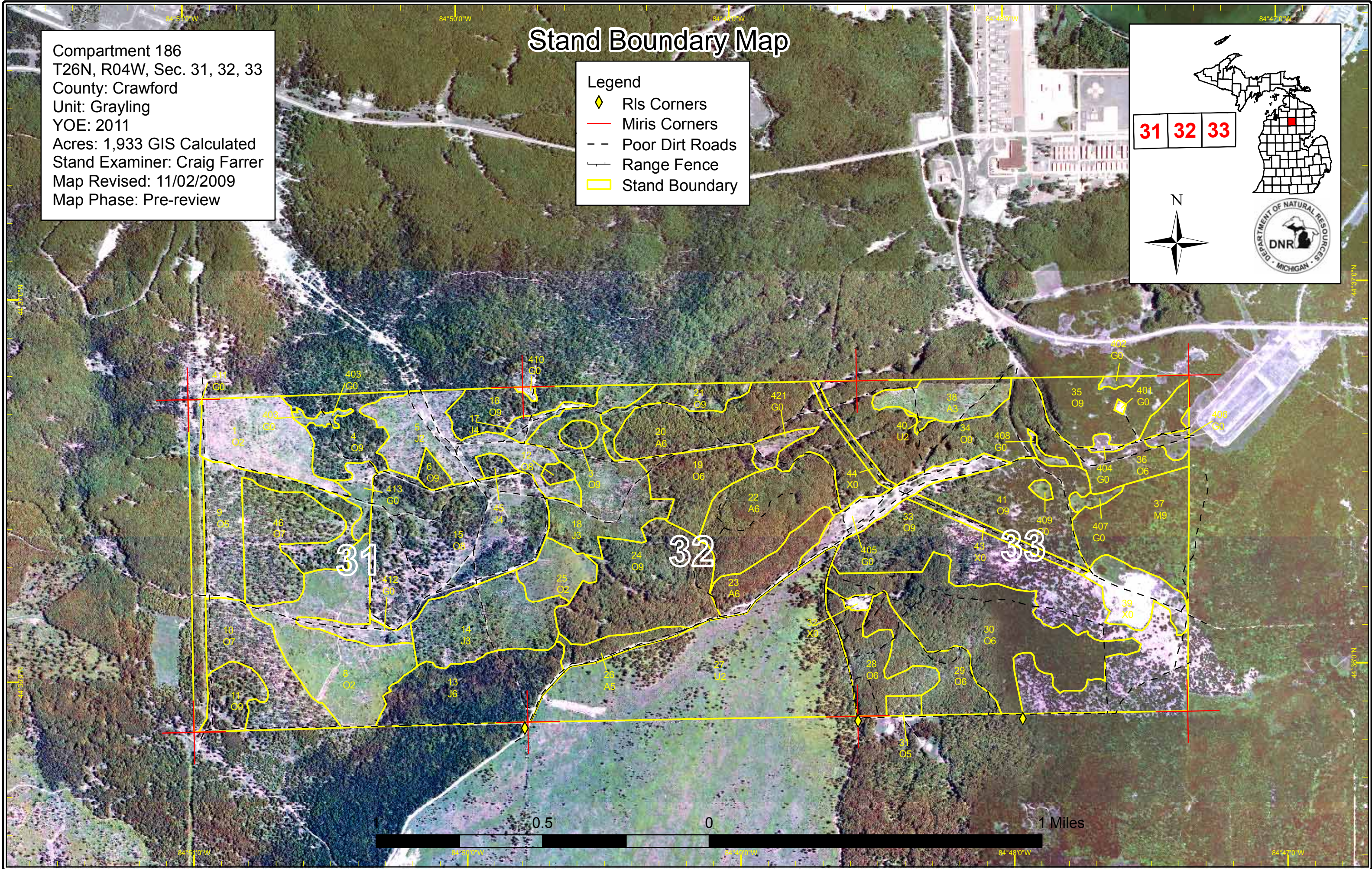
Compartment 186  
T26N, R04W, Sec. 31, 32, 33  
County: Crawford  
Unit: Grayling  
YOE: 2011  
Acres: 1,933 GIS Calculated  
Stand Examiner: Craig Farrer  
Map Revised: 11/02/2009  
Map Phase: Pre-review

- Legend
- ◆ RIs Corners
  - Miris Corners
  - - Poor Dirt Roads
  - Range Fence
  - Stand Boundary

31 32 33

N

DEPARTMENT OF NATURAL RESOURCES  
DNR  
MICHIGAN



Compartment 186  
 T26N, R04W, Sec. 31, 32, 33  
 County: Crawford  
 Unit: Grayling  
 YOE: 2011  
 Acres: 1,933 GIS Calculated  
 Stand Examiner: Craig Farrer  
 Map Revised: 11/02/2009  
 Map Phase: Pre-review

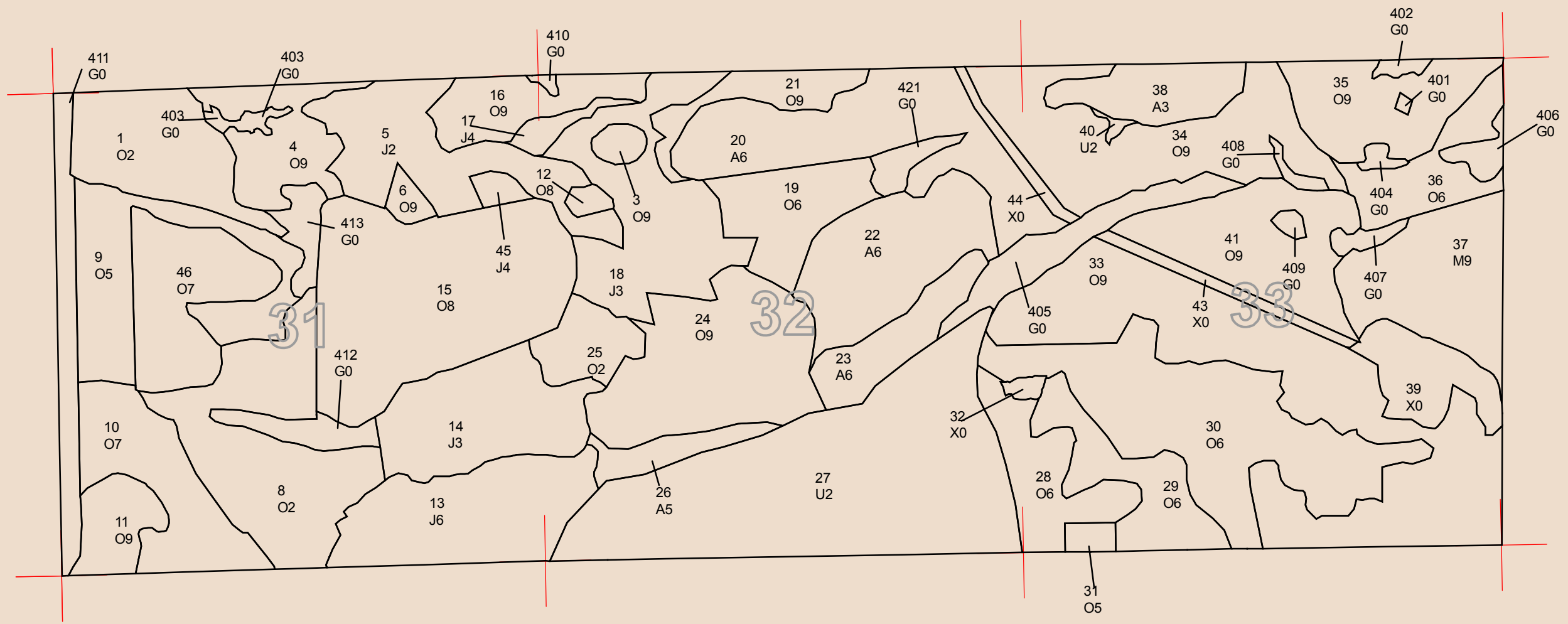
# Dedicated & Proposed Special Conservation Area Map

**Legend**

- Miris Corners
- Stand Boundary
- Dedicated Special Conservation Areas
- OI Special Conservation Areas
- Research, Development, and Military Lands

31 32 33

N  
 DEPARTMENT OF NATURAL RESOURCES  
 DNR  
 MICHIGAN



84°51'0"W 84°50'0"W 84°49'0"W 84°48'0"W 84°47'0"W

44°37'0"N

44°36'0"N

44°37'0"N

44°36'0"N



**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.

ERA = Ecological Reference Area  
 HCVA = High Conservation Value Area  
 SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.