

## **Compartment Review Presentation**

**Traverse City Forest Management Unit** 

Compartment 61231 Entry Year 2017 Acreage: 1,930

County Kalkaska

Management Area: Camp Grayling

Revision Date: 2015-05-14

Stand Examiner: Donna Hagan

**Legal Description:** 

T25N R5W, Sections 1, 2 & 3

## **Identified Planning Goals:**

Management goals within this compartment must be meshed with the needs of the military. Summer troop training areas are most useful when dense forest canopy cover is in place, so the goal shall be to retain a high percentage of timber stands with this condition. Some forest canopy covers will be reduced by thinnings and other partial cuttings. It is equally important, to have adequate understory and ground covers for military maneuver areas. In the end, a variety of stand conditions will be in place.

#### Soil and topography:

Excessively drained, poor sandy soils dominate the compartment. The main soil type is Roselawn sand. The terrain ranges from slightly rolling to hilly.

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

The entire land base in this compartment is state owned with the administrative authority being the Department of Military and Veterans Affairs. These lands are commonly referred to as Military Board Lands. FRD manages the timber upon these lands with guidance and direction from the staff of the Michigan National Guard at Camp Grayling. Military troop training is the primary activity in this area. No fenced ranges or live ammunition exercises occur in this area. A mortar range is located just east of this compartment in Crawford County. Some military bivouac areas are located in the compartment and these areas are used annually. In 2001, the military had a trail developed for tracked vehicles and a portion of that route is located near the south, east and west edges of this compartment. This trail, commonly referred to as the tank trail, is no longer in use because there are no tanks in the State of Michigan anymore. A cement refueling pad is located in the very southwest corner of Section 3 (stand 62). Military Board lands are open to the public for recreational use. Public use of the area includes snowmobiling, hunting and mushroom/berry picking. The adjacent lands around the perimeter of this compartment are all state owned.

#### **Unique Natural Features:**

No endangered or threatened species of plants or animals are known to exist in the compartment.

### Archeological, Historical, and Cultural Features:

This area contains several old railroad grades from the turn of the century logging era. It is the intent of the Military to maintain the integrity of these old grades as they exist today. No known historical or archeological sites are listed for this area.

#### **Special Management Designations or Considerations:**

This compartment is entirely under the jurisdiction of the Department of Military and Veteran Affairs.

#### **Watershed and Fisheries Considerations:**

There is no water within the compartment.

#### Wildlife Habitat Considerations:

The north half of the compartment consists of an ice contact ridge (LTA 3111). Topography is generally steep and irregular. Soil types are excessively drained loamy sand. Oak is a major component within this compartment. Aspen stands are also present. The south half of the compartment consists of a broad, flat outwash plain (LTA 5111). Topography is generally level with excessively drained sands. Oak stands and aspen stands again dominate this portion of the compartment. There are also shrubland and one jack pine stand.

Acorns are an important food source for many different wildlife species. Wildlife considerations for oak stands may include leaving a scattering of mast-producing trees, use of harvest methods to perpetuate oak within the community, species

diversification within each stand, and leaving of den/nest trees (by sale specification). This will insure biodiversity of wildlife species within these stands. Examples of wildlife found here include fox & gray squirrel, scarlet tanager, spotted salamander, and garter snake. Aspen stands are an important habitat type for ruffed grouse and white-tailed deer. Ruffed grouse use different aged aspen throughout their life cycle. Younger stands provide cover while older stands provide catkins (food source) for the winter months. Clearcutting helps facilitate age class diversification of aspen by mimicking the necessary disturbances vital for regeneration. The creation of CWD trees for drumming logs and maintaining berry-producing shrubs is also desirable. This compartment is Military Board Land so the creation CWD will be subject to the Military's approval. Where applicable, the shrublands should be maintained by handfelling or by prescribed burning. Shrublands within this LTA type have a history of wildfire, and many species (for example, hill's thistle & little bluestem) respond positively to prescribed burning. The berry-producing shrubs provide an important food source. Examples of wildlife species found here include bluebird, badger, and green snake.

## 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 200 and 600 feet. Beneath the glacial drift are the Mississippian Michigan Formation and Marshall Sandstone. The Michigan is quarried for gypsum and the Marshall has been used as a building stone in other areas of the State. This area is located just north of Garfield 8 and Beaver Creek Fields. Garfield 8 produces from the Devonian Richfield and the Ordovician PdC and Beaver Creek produces from the Devonian Richfield, the Detroit River Formation and the Ordovician PdC. There are leases in Section 3 that are Held By Production by the Garfield 8 Field.

#### Vehicle Access:

Numerous trails and roads are found in the compartment. The road system is extensive and will remain as is since the roads are needed for modern day military training. Roads developed during timber harvests will be closed once the harvest is complete unless the military determines that the road is one that they would like to keep open.

## **Survey Needs:**

No additional corners are necessary.

## **Recreational Facilities and Opportunities:**

There are no designated recreational facilities within this compartment. It is common to find deer camps in this compartment in the Fall. Snowmobilers use the pipeline corridor during the winter. Mushroom hunters and berry pickers use the compartment seasonally. Since the military uses the area for training during the summer, the recreational camping opportunities are limited. (T.M.N. 12/10/14)

## **Fire Protection:**

This compartment is located in a relatively remote part of Kalkaska County that is primarily oak forest. The main forest fire difficulty will be the lengthy response time for initial attack units and the lack of a nearby water supply. It is 27 miles from the Kalkaska Office and 16 miles from the standby station at the Garfield Township Fire Hall. Roads are good for access to the southern part of the compartment. Fires occurring in the north half of the compartment will be much more difficult to access because the North/South roads are generally just two-track trails that often pass through some hilly terrain. Fire control crews will need to assess the topography and insert fire control lines accordingly. There are only small amounts of volatile pine fuels and those are located in the very northwest corner of the compartment so this reduces the chances of a catastrophic fire occurrence. Fires in open grass areas and fires burning up the hillsides may consume a fair amount of area before they can be controlled. Since slash is required to be removed from timber sales that are upon Military Board land, cut-over areas will not contain the usual fuel loads following harvests and may actually act as fuel breaks.

#### **Additional Compartment Information:**

Timber harvests upon Military Board lands must be done in such a manner that slash is removed from the sale area, stumps must be cut as low as possible and equipment/forest products must be removed from the sale area during the summer. Logging operations are generally limited during the period of May 1 - October 1. The Tank Trail, which is no longer used by the military, will no longer have restrictions on cutting along the trail. (There use to be restrictions on cutting along the trail to limit regeneration.)

The following reports from the Inventory are attached:

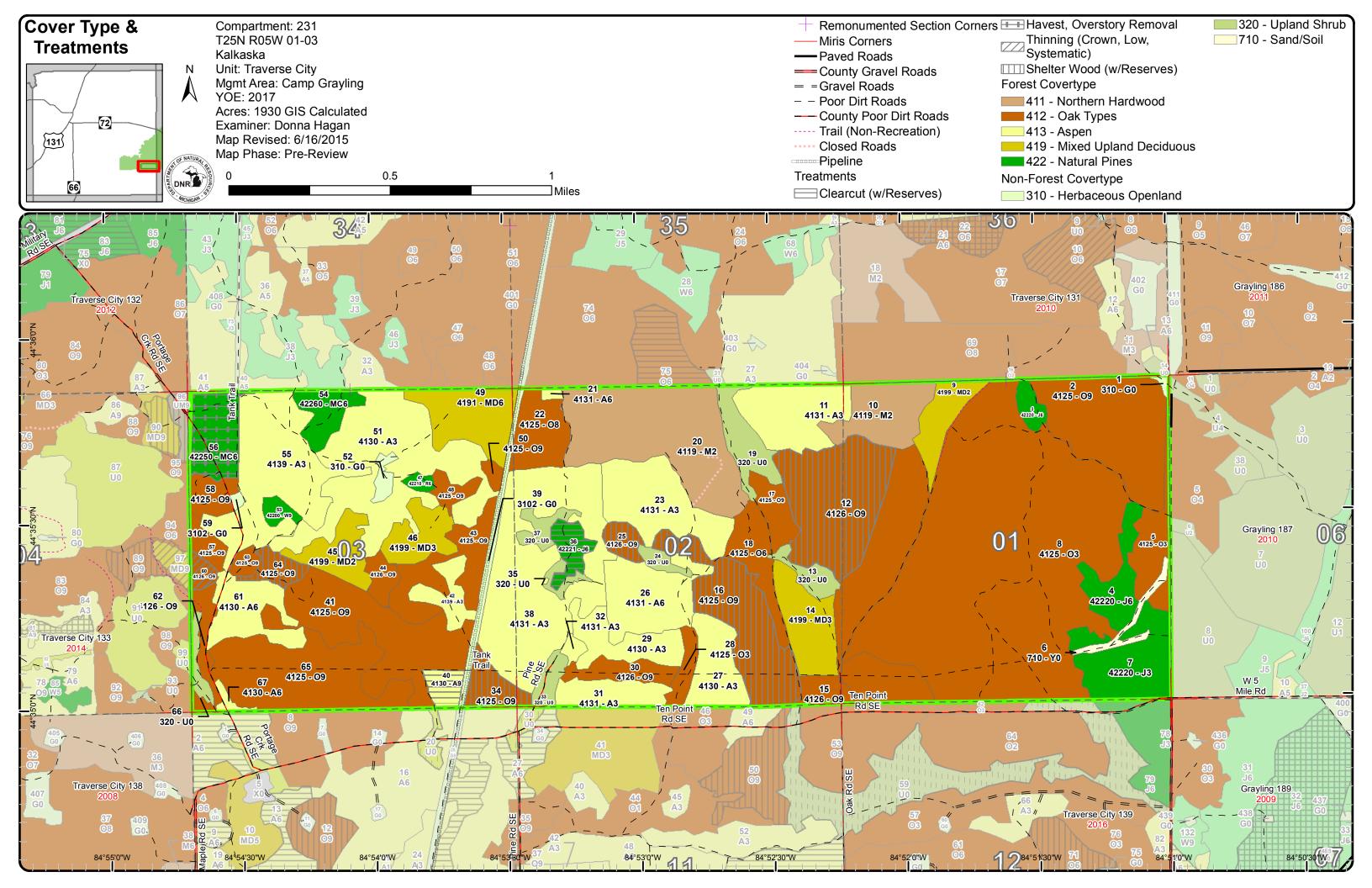
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

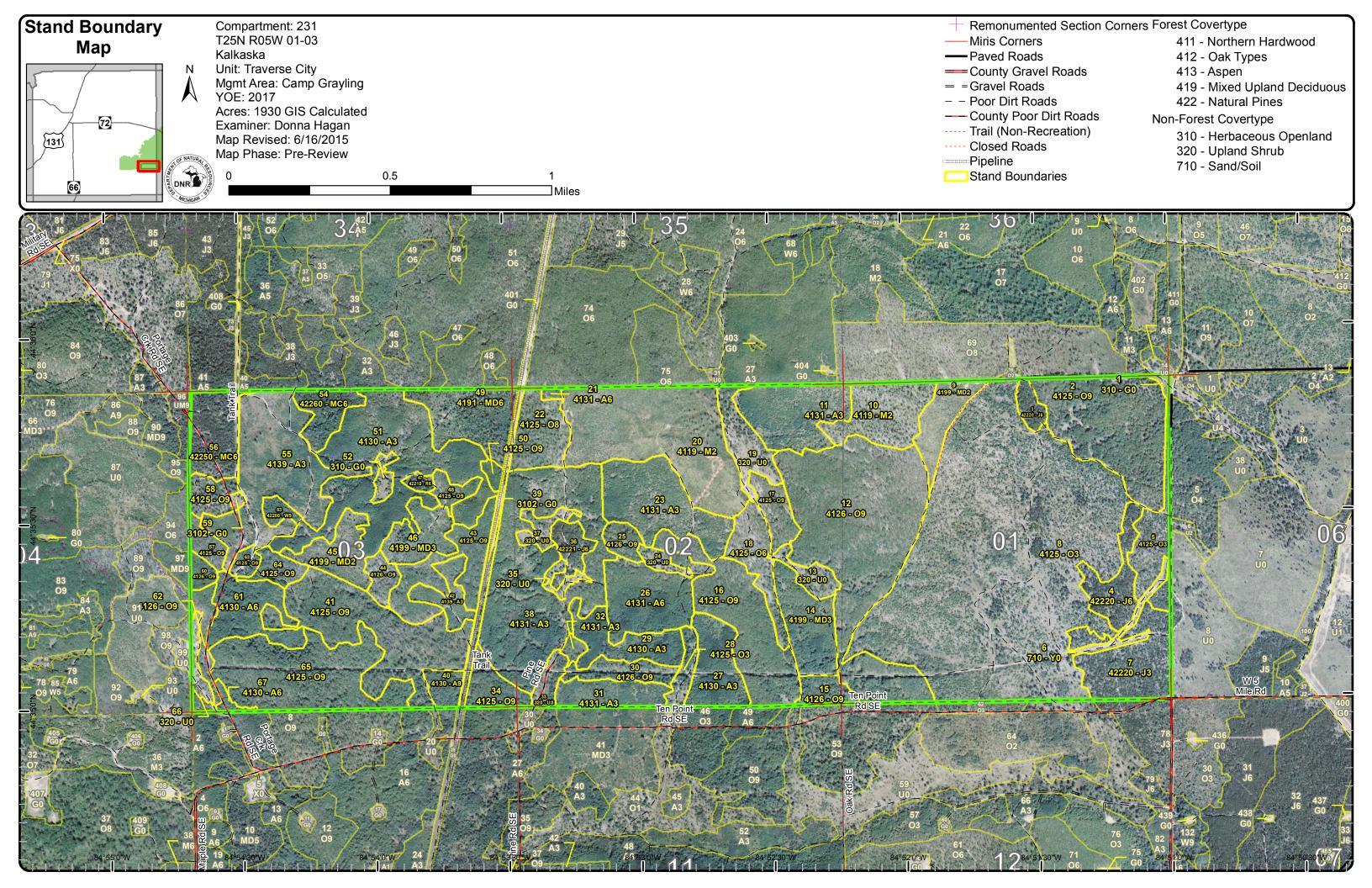
The following information is displayed, where pertinent, on the attached compartment maps:

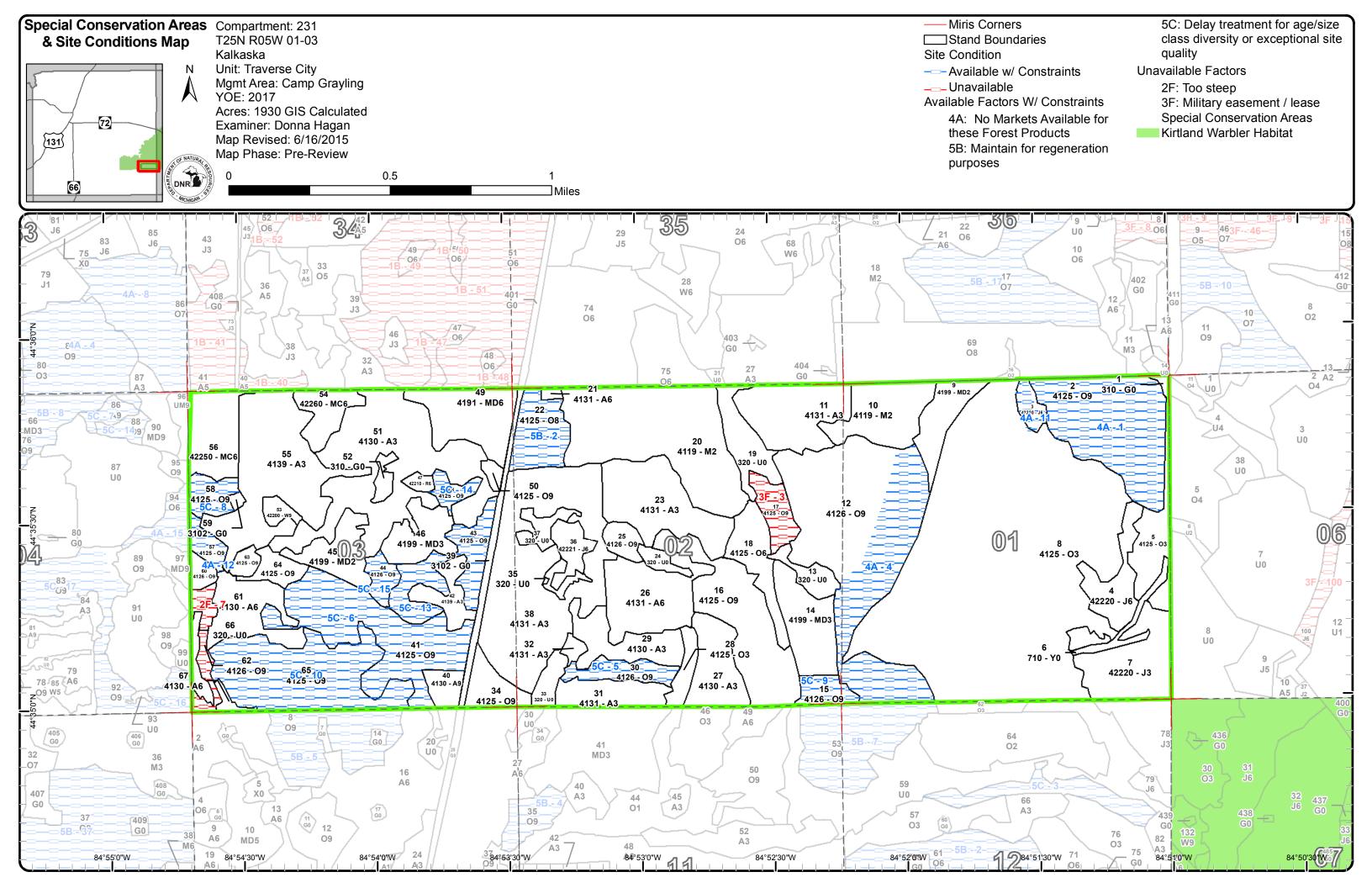
Base feature information, stand boundaries, cover types, and numbers Proposed treatments

Site condition boundaries

Details on the road access system







Compartment 231 Year of Entry 2017

Traverse City Mgt. Unit

Donna Hagan: Examiner



## Age Class

	Hor	Koria C	3/2	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	8 / 12	or so	, , , , ,	8 / K	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\$ /s	70,	Ž, Ž,	,		N. A. L.	B* Jue	To See To	_
Aspen	0	107	132	95	146	30	0	0	9	0	0	0	0	0	0	0	0	0	519	
Herbaceous Openland	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	
Jack Pine	0	0	0	0	41	20	10	6	0	0	0	0	0	0	0	0	0	0	77	
Mixed Upland Deciduous	0	57	0	0	28	0	32	0	0	0	0	0	0	0	0	0	0	0	117	
Natural Mixed Pines	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	26	41	
Northern Hardwood	0	91	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	
Oak	0	0	365	0	0	0	0	0	21	176	303	82	9	13	0	0	0	0	969	
Red Pine	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	
Sand, Soil	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Upland Shrub	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	
White Pine	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4	
Total	80	255	528	95	215	50	57	9	34	176	303	82	9	13	0	0	0	26	1932	



## **Report 2 – Treatment Summary**

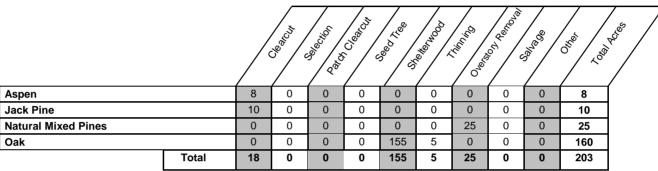
Traverse City Mgt. Unit Year of Entry: 2017

#### **Acres of Harvest**

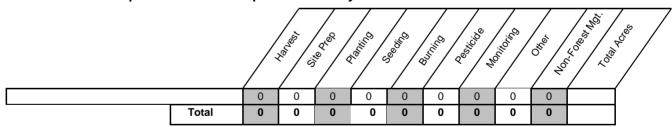
Compartment 231
Total Compartment Acres: 1,930

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

## **Cover Type by Harvest Method**



## **Proposed and Next Step Treatments by Harvest Method**



Traverse City Mgt. Unit

Compartment: 231 Year of Entry: 2017 Donna Hagan : Examiner

## **Dominant Site Conditions**

	3F	4A	5B	5C
Aspen				
Herbaceous Openland				
Jack Pine		5		
Mixed Upland Deciduous				
Natural Mixed Pines				
Northern Hardwood				
Oak	13	148	23	219
Red Pine				
Sand, Soil				
Upland Shrub				
White Pine				
Total Forested Acres	13	153	23	219
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	e Dominant Site . Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	4A: No Markets Available for these Forest Products	71	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Possible bullets in to	rees.					
2	Available	5B: Maintain for regeneration purposes	23	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
3	Unavailable	3F: Military easement / lease	13	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Heavy bivouac area						

# Report 5 – Site Conditions

Traverse City Mgt. Unit

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Compartment: 231 Year of Entry: 2017

4	Available	4A: No Markets Available for these Forest Products	70	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
	<b>Comments:</b> Possible bullets in	trees.					
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	71	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	2F: Too steep	12	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

# Report 5 – Site Conditions

Traverse City Mgt. Unit

Donna Hagan : Examiner

Compartment: 231 Year of Entry: 2017

10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	72	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
11	Available	4A: No Markets Available for these Forest Products	6	Unspecified	Unspecified	Unspecified	Unspecified
	comments: cossible bullets in	trees.					
12	Available	4A: No Markets Available for these Forest Products	7	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
13	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	30	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
15	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						

Mgt. Unit

Compartment: #Type! Year of Entry:



## Report 6 - 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				

Traverse City Mgt. Unit

Compartment: 231

Year of Entry 2017



# Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

Conservation	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated 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 Fow Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research, and over 144,000 acres of Military Lands.	0 acre Houghton Lake Wildlife Research at includes most of Garden Island, all of x and North Fox Islands), the Cusino
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and coop U.S. Fish and Wildlife service for the recovery of threatened and 365, Endangered Species Protection, of the Natural Resources PA 451, and the Federal Endangered Species Act of 1973. This species plans in various stages of review. As of now only two explover Habitat.	endangered species, as governed by Part and Environmental Protection Act, 1994 is an active program, with proposed

S	Traverse City Mgt. Unit t			Report 8	- Forested	Stands Compartment: 231 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4125 - Black, N. Pin Oak	Sawtimber Well	70.6	85	141-170	A few aspen clones throughout stand.
3	42220 - Natural Jack Pine	Poletimber Well	6.1	69	81-110	Would treat this stand but concerned with bullets in trees.
4	42220 - Natural Jack Pine	Poletimber Well	20.1	49	81-110	Could treat except for possible bullets in trees.
5	4125 - Black, N. Pin Oak	Sapling Well	23.4	12	Immature	Stand was cut between 2000 & 2002. Sale # 023-00. Had to refund a lot of money because of bullets in trees.
7	42220 - Natural Jack Pine	Sapling Well	41.0	32	Immature	Stand was cut in 1982.
8	4125 - Black, N. Pin Oak	Sapling Well	333.5	13	Immature	Scattered white oak logs throughout stand. Also small clumps of mature jack pine within stand. Sale #023-00 - had to refund a lot of money on this sale because of bullets in trees.
9	4199 - Other Mixed Upland Deciduous	Sapling Medium	18.1	5	Immature	231 Lone Oak Sale #684-07. Oak has been hammered by deer browse.
10	4119 - Mixed Northern Hardwoods	Sapling Medium	30.8	13	1-50	Stand was cut as part of the Salt Lick Sale #027-00. All oak <12" was cut along with all aspen and red maple. 3 dead oak/acre was also left.
11	4131 - Aspen, Oak	Sapling Well	37.1	13	Immature	This stand was cut as part of the Salt Lick Sale #027-00 in 2001.
12	4126 - White, Black, N. Pin Oak	Sawtimber Well	140.3	94	141-170	This stand needs to be treated but concerns with bullets in trees may stop the needed treatment.
14	4199 - Other Mixed Upland Deciduous	Sapling Well	28.3	34	Immature	Sale #9-80. Oak and red maple dominate the stand.
15	4126 - White, Black, N. Pin Oak	Sawtimber Well	9.1	95	51-80	Part of Sale #9-80 - Waldo Hill Block. Nice regeneration coming in.
16	4125 - Black, N. Pin Oak	Sawtimber Well	55.6	103	141-170	
17	4125 - Black, N. Pin Oak	Sawtimber Well	12.6	121	111-140	This stand receives heavy use by military vehicles since they can maneuver around the trees due to the open spacing.
18	4125 - Black, N. Pin Oak	Poletimber Well	20.6	71	81-110	This stand receives heavy use by military vehicles since they can maneuver around the trees due to open spacing in areas.
20	4119 - Mixed Northern Hardwoods	Sapling Medium	90.6	4	Immature	McLachlan Hill Oak Sale #614-07. Cut completed in 2010. Some mature oak was left in the north east part of stand, but most have died.

S t				Report 8	- Forested	Stands Compartment: 231 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4131 - Aspen, Oak	Poletimber Well	1.4	73	81-110	This stand was left as retention as part of the McLachlan Hill Oak Sale #614-07.
22	4125 - Black, N. Pin Oak	Sawtimber Medium	22.8	89	51-80	McLachlan Hill Oak Sale #614-07. All oak was left in stand that was greater than 12"DBH.
23	4131 - Aspen, Oak	Sapling Well	45.8	12	Immature	Stand was cut in 2002, sale #028-00 - Nor-Easter.
25	4126 - White, Black, N. Pin Oak	Sawtimber Well	7.3	91	141-170	
26	4131 - Aspen, Oak	Poletimber Well	38.7	31	51-80	Sale #19-80.
27	4130 - Aspen	Sapling Well	25.3	13	Immature	Sale #029-00. Stand cut in late June/early July of 2001.
28	4125 - Black, N. Pin Oak	Sapling Well	8.1	15	1-50	Old U type filling in.
29	4130 - Aspen	Sapling Well	23.5	13	Immature	Sale #029-00.
30	4126 - White, Black, N. Pin Oak	Sawtimber Well	12.7	98	141-170	This stand is the result of 2 separate sales, 614-07 & 632-06, separated by the defunct "Tail Trail". When the Tank Trail was developed, the Military wanted cover left along the trail to prevent regeneration, mainly of aspen. The Tank Trail is no longer used, so this requirement will no longer be used.
31	4131 - Aspen, Oak	Sapling Well	18.2	7	Immature	Sale #632-06. Most of the timber sale occurred in compartment 139.
32	4131 - Aspen, Oak	Sapling Well	2.8	3	Immature	Sale #614-07. Cut in Fall of 2010.
34	4125 - Black, N. Pin Oak	Sawtimber Well	13.3	92	141-170	Stand appears to have been cut sometime in the early 1970's, where aspen and red maple were removed and the oak was left.  Lots of regeneration in places - aspen, red maple and oak.
36	42221 - Natural Jack Pine, Mixed Deciduous	Poletimber Well	10.2	58	81-110	
38	4131 - Aspen, Oak	Sapling Well	106.9	31	Immature	Density varies throughout stand.
40	4130 - Aspen	Sawtimber Well	7.7	74	81-110	
41	4125 - Black, N. Pin Oak	Sawtimber Well	71.2	99	51-80	Tank Trail Oak Sale #676-07
42	4139 - Aspen, Mixed Deciduous	Sapling Well	12.5	6	Immature	Waldo Hill Oak #609-07.

s t	Traverse City	Traverse City Mgt. Unit			- Forested	Stands Compartment: 231 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
43	4125 - Black, N. Pin Oak	Sawtimber Well	30.3	93	111-140	
44	4126 - White, Black, N. Pin Oak	Sawtimber Well	7.5	93	51-80	
45	4199 - Other Mixed Upland Deciduous	Sapling Medium	19.6	6	Immature	Waldo Hill Oak #609-07.
46	4199 - Other Mixed Upland Deciduous	Sapling Well	19.3	6	Immature	Waldo Hill Sale #609-07. Small 1/2 acre exclusion within stand.
47	42210 - Natural Red Pine	Poletimber Well	2.7	60	51-80	Waldo Hill Sale # 60-07. Everything removed but the pine.
48	4125 - Black, N. Pin Oak	Sawtimber Well	6.5	93	141-170	
49	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	32.4	50	51-80	Waldo Hill Sale #609-07. All aspen and red maple removed and most of the oak. No pine was cut in this stand.
50	4125 - Black, N. Pin Oak	Sawtimber Well	2.8	84	111-140	Small stand of oak located on a rather steep north facing slope with Trans-Canada pipeline bordering to the East side of stand.
51	4130 - Aspen	Sapling Well	95.0	24	Immature	Sale #37-89.
53	42200 - Natural White Pine	Sawtimber Well	4.4	72	81-110	Small pocket of natural white pine with some oak sawlogs mixed in. Oak quality is low to fair.
54	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	14.7	52	81-110	
55	4139 - Aspen, Mixed Deciduous	Sapling Well	73.1	5	Immature	Sale #605-07.
56	42250 - Pine, Oak	Poletimber Well	26.0	70	51-80	
57	4125 - Black, N. Pin Oak	Sawtimber Well	7.3	84	111-140	Poor quality oak, some dead. Scattering of aspen. Steep in areas, rest is rolling. If ever treat the stand west, stand 94, compartment 133, treat this stand also.
58	4125 - Black, N. Pin Oak	Sawtimber Well	10.4	109	51-80	The aspen and red maple and marked oak were removed from this stand in 08-09. Sale #605-07.
60	4126 - White, Black, N. Pin Oak	Sawtimber Well	4.6	109	141-170	
61	4130 - Aspen	Poletimber Well	27.1	43	51-80	

S t	Traverse City	/ Mgt. Unit		Report 8	<ul><li>Forested</li></ul>	Stands Compartment: 231 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
62	4126 - White, Black, N. Pin Oak	Sawtimber Well	11.5	109	111-140	This stand may be difficult to treat due to the terrain. The very southern end of stand has an aspen component and could be treated with compartment 139. The eastern edge and north part of stand is very hilly.
63	4125 - Black, N. Pin Oak	Sawtimber Well	4.2	97	81-110	Oak stand with a white pine understory.
64	4125 - Black, N. Pin Oak	Sawtimber Well	8.6	118	171-200	
65	4125 - Black, N. Pin Oak	Sawtimber Well	71.8	86	81-110	Sale #020-00. All aspen and red maple removed in stand. Heavy red maple and pockets of aspen regenerating. Nice red oak in most of stand. No need for treatment at this time.

51-80

Poletimber Well

2.9

43

4130 - Aspen

67

Mgt. Unit

# Report 9 - Nonforested Stands

Compartment: Year of Entry:



Stand	Cover Type	Acres	Site	General Comments:
		#Type!		